

**Engagement experiences: Adult English language learner students in
advanced manufacturing at a midwestern community college**

by

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The student author and the program of study committee are solely responsible for the content of this dissertation. The Graduate College will ensure this dissertation is globally accessible and will not permit alterations after a degree is conferred.

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DEDICATION

Appreciation is a wonderful thing . . . don't overlook it.

Unknown source

This dissertation is dedicated to my family. I come from and grew up with a long list of educationalist family members. I was confident of my family's support to pursue and achieve whatever level in education I was motivated to complete. Although I had the confidence, there were times along my path to higher education that I had to rely on family for support—both financial and emotional support—as well as be motivated by family that have demonstrated strength, persistence, and perseverance to succeed even in times of crisis.

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This dissertation study would not have been possible without the six adult English language learner students who were open to sharing their life stories and experiences with me. Some of their migration stories sometimes brought back very sad emotions as they reflected on the sacrifices they made to leave their home countries. Whether the move to the United States was voluntary to join families, economic to seek better paying jobs, or rushed out of their native country due to civil war, these participants shared experiences that were common including adjusting to a new land, learning a new language, feelings of guilt for sacrificing culture and customs, and hoping to achieve the American dream for themselves

and their families. I feel blessed and very fortunate to have been given this opportunity to tell their story, which is similar to the many adult ELL students enrolled in U.S. postsecondary institutions.

ABSTRACT

The purpose of this phenomenological study was to explore and gain an in-depth understanding of the day-to-day lived engagement experiences of six adult ELL students enrolled in an advanced-manufacturing program at a midwestern community college. Specifically, this study collected the rich engagement stories and meaning participants assigned to their stories and experiences. The essence of these experiences was solicited by asking two questions: (a) What are the perceived on-campus engagement experiences and social networks that support and promote success among adult ELL students in advanced manufacturing and (b) Are there perceived engagement experience issues and barriers for adult ELL students? Two theories, Alexander Astin's student involvement theory and Malcolm Knowles' adult learning theory, provided theoretical lenses for the study. A constructivist epistemological foundation, postmodernist perspective, and qualitative phenomenology methodological approach guided the collection and analysis of the data. During one-on-one semistructured interviews, participants were asked to describe their interaction experiences with program faculty, peers, and staff and how they perceived these experiences. Based on participants' feedback and my in-class and lab observations, four major themes emerged as meaningful or barriers for students' engagement: (a) multiple life roles, (b) language, (c) faculty and employer partnerships, and (d) online technology. Given that students placed a high value on interaction with and between faculty and employers, that students benefited from the use of online technology due to their limited English skills, and that positive interactions seemed to increase the likelihood for student success, three recommendations to enhance student interaction emerged.

Community colleges seeking to build robust programs to support adult ELL students in advanced manufacturing programs should consider: (a) forming partnerships with local and regional employers; (b) providing ongoing professional development for faculty and staff; (c) forming partnerships with local nonprofit organizations; and (d) exploring the use of technology to engage students, thereby expanding and supporting adult ELL students in higher education. Recommendations for future research include conducting additional investigations into the engagement experiences of (a) adult female ELL students in advanced manufacturing, (b) ELL students in degree programs that adopt a distance learning platform (c) ELL students in the K–12 system, and (d) faculty perceptions of adult ELL students.

EXECUTIVE SUMMARY

Prior to completing this study, I completed a capstone project that involved adult basic education students involved in an Integrated Basic Education and Skills Training program at a midwestern community college. The purpose of the case study research was to construct an understanding of the perceptions and meanings Integrated Basic Education and Skills Training students apply to their interaction with faculty. Alexander Astin's student involvement theory guided the research methodology, which included constructivism epistemology, a postmodern theoretical perspective, designing the data collection methods (interviews and reflective journals), and analysis of the data.

Based on the major emphasis that each participant provided during the interviews and my personal observations, two major themes emerged with a number of clustered topics: (a) faculty concern and understanding and (b) knowledgeable and resourceful faculty. Three recommendations to enhance faculty interaction with students emerged: (a) hire faculty (possibly full time) from similar backgrounds with whom students can identify as role models, (b) provide educational and cultural diversity training for faculty, and (c) train faculty to answer and prepare students on the rules for education and jobs including referring students to counseling, financial aid enrollment, transportation, as well as health and childcare resources.

This capstone study prepared me in many ways including giving me the opportunity to conduct a qualitative study from which I was able to adapt some of the interview questions and strategies, consent documentation, coding, and analysis strategies for my dissertation study. The literature review, themes, and recommendations for practitioners from the pilot study also anchored and provided additional knowledge and preparation for this study.

CHAPTER 1. INTRODUCTION

Below is a brief list outlining why the engagement experiences of adult English language learners (ELLs) in career and technical training should be studied.

1. The United States continues to be a leader in immigration.
2. The top five countries from which migrants come are countries where English is not a primary language.
3. The majority of immigrants fall between 20 and 64 years of age.
4. The current national debate on immigration and workforce training.
5. The continuous growth in nonnative-born residents in the Midwest.
6. The national need to fill skills-gap positions, especially middle-skill level jobs.
7. The importance of economic development and upward mobility.
8. The major role that community colleges play.
9. Student engagement is a major factor for student success.
10. The majority of student engagement research completed has focused on native-born and international students and not adult ELL students.
11. There is gap in research regarding the engagement experiences of adult ELLs.

Background

The United States continues to be the leading destination of choice for immigrants, and the number of nonnative-born legal and illegal residents in the United States continues to grow. It was estimated that 130 million people were living outside the country of their birth at the beginning of the 21st century (Zweig, 2004). Between 2000 and 2007, there was a 30% increase of immigrants residing in the United States leading to a record 41.3 million authorized and 12 million unauthorized immigrants (Pew Research Center, n.d.). Data from

the Pew Research Center (n.d.) showed that the total number of nonnative-born residents in the United States grew from 43.4% in 2003 to 52.6% in 2013 (see Table 1). Current trends indicate a shift among recent migrants after arrival in the United States from most of them settling in coastal and urban states with large numbers of foreign-born populations such as New York and California to more of them settling in midwestern states.

Table 1

Foreign-born United States Resident Population (in millions), 2003–2013.

Date	All Immigrants	Unauthorized Immigrants
2003	33.7	9.7
2004	34.3	10.4
2005	35.8	11.1
2006	37.5	11.3
2007	38.0	12.0
2008	38.0	11.6
2009	38.5	11.1
2010	39.9	11.2
2011	40.4	11.1
2013	41.3	11.3

Source: Pew Research Center (n.d.)

Data from a Pew Research Center (n.d.) survey in 2012 showed that the majority of foreign-born U.S. residents migrated from countries where English is not a primary language (see Table 2). Enrollment data among K–12 public and postsecondary institutions support this increase. It has been estimated that, by 2030, 40% of the K–12 student population will be ELL students (Herrera & Murry, 2005). Iowa has continued to experience a steady growth in ELL enrollment over the past 10 years. An Iowa Condition of Education Report

Table 2

Country of Birth for Foreign-born United States Resident Population, 2003–2013.

Country	<i>n</i>	%
Mexico	11,489,387	28.2
India	1,974,305	4.8
Philippines	1,861,996	4.6
China	1,719,819	4.2
Vietnam	1,264,188	3.1
El Salvador	1,254,501	3.1
Cuba	1,114,864	2.7
Korea	1,105,653	2.7
Dominican Republic	960,211	2.4
Guatemala	880,869	2.2
Canada	799,085	2.0

Source: Pew Research Center (n.d.).

showed that ELL students within Iowa’s K–12 schools jumped from 11,264 in 2001 to 26,209 in 2013 (Iowa Department of Education, 2014).

Over one third of these immigrants (38%) are between 20 and 64 years of age (Pew Research Center, n.d.), and these immigrants entered the United States with a variety of educational backgrounds. A common characteristic among immigrants in this group is that many come from nonnative-English-speaking backgrounds. Many attend a community college or utilize other local organizations to improve their English language proficiency while or prior to beginning mainstream college courses. Although building English proficiency is the initial goal for many of these students, the ultimate goal for a majority is to move into mainstream college credit classes toward a bachelor’s degree or career and technical training.

Based on the trends above, it is predicted that adult ELLs are going to become a large part of the U.S. workforce population. For the nation's advanced manufacturing industry, providing the necessary training for adult ELLs is a major step toward economic prosperity. A 2015 report by Deloitte and the Manufacturing Institute estimated that, over the next decade, nearly 2 million of the 3.5 million manufacturing jobs will be left unfilled due to a skills gap. The success and timely training of the adult ELL workforce thus need to be a major concern for college administrators as well as local employers and leaders.

Researchers have shown that student engagement in their educational career contributes to student success, persistence, and graduation. Alexander Astin (1984) with his student involvement theory argued that students who are more engaged and actively involved in campus activities have a higher rate of success compared to their peers who are less actively involved. Much of the research about student involvement has focused on traditional students at 4-year institutions. However, other researchers, such as Malcolm Knowles (1980) with his adult learning theory, seem to argue that, although adult ELL students have different characteristics, they may benefit from and persist with some type of intentional involvement practices on campus.

Statement of the Problem

The United States continues to experience a steady increase in the number of immigrants from countries where English is not a primary language. The majority of these immigrants comprise adults and nonnative English speakers. Many have chosen to pursue technical education at postsecondary institutions, mostly at community colleges. Little is known about the engagement experiences of adult ELL students on campus including how they navigate the educational systems and customs to increase educational attainment as well

as their interactions with faculty, peers, and student services. The vast majority of research on student engagement has focused on native, White traditional and international students at 4-year institutions. This research study bridges the existing literature regarding adult ELL students and their engagement experiences with faculty, peers, and student services.

This study's findings provide institutional leaders the information to prepare and identify support services that can help this vulnerable subset of students. As the United States continues to lead in immigration or be the first option for immigrants and nonnatives coming from countries where English is not a primary language, coupled with the U.S. workforce needing trained workers and immigrants need training, and knowing that student engagement in general is critical for student success, research is needed to explore how new immigrants are being trained and what their experiences on campus are.

Student Engagement

There is no single profile that can be used to describe the characteristics of adult ELL students, because these individuals come from diverse backgrounds and educational levels. Because of this diversity, no single program can address these students' social, economic, and academic needs. However, student involvement and engagement can benefit all students. Astin's (1984) work has been supported by research that has pointed to engagement as a single experience that can promote student persistence and achievement. However, the majority of the research cited has focused on native, traditional, undergraduate students at 4-year universities. Astin (1984) defined student involvement as "the amount of physical and psychological energy that the student devotes to the academic experience" (p. 297). The reasoning behind student involvement theory is that students who are more engaged and actively involved in campus activities have a higher rate of success compared to

their peers who are less actively involved. Further, student involvement theory proposes that actively involved students are more likely to be aware of and feel comfortable in their campus environments, leading to success.

Purpose of the Study

The purpose of this phenomenological study was to explore and gain an in-depth understanding of the day-to-day lived engagement experiences of six adult ELL students enrolled in an advanced-manufacturing program at a midwestern community college. Specifically, for this study the rich engagement stories and the meaning participants assigned to their stories and experiences were collected. The majority of student engagement studies have focused on White, traditional-age students who attend 4-year institutions (Wirt & Jaeger, 2014). Townsend, Donaldson, and Wilson (2005) pointed out that only 8% of the estimated 2,300 student engagement articles published between 1990 and 2003 in five major higher education journals mentioned community colleges.

With the increasing number of immigrants from countries where English is not a primary language and the resulting increase in the number of adult ELL students pursuing career and technical training through community colleges, as well as the national need for a trained and skilled workforce, it is important to expound on the engagement experiences and perceptions of adult ELL students. The findings of this exploratory study can provide guidance to college administrators in developing and implementing effective programs to address the engagement challenges faced by adult ELL students in advanced-manufacturing training programs.

Research Questions

Overall, this research was guided by two research questions:

1. What are the perceived on-campus engagement experiences and social networks that support and promote success among adult ELL students in advanced manufacturing?
2. Are there perceived engagement experience issues and barriers for adult ELL students?

Significance of the Study

The need to study and understand the engagement experiences of adult ELL students in advanced-manufacturing programs at a community college stems from (a) the increasing number of this population in the United States and the need to involve them in higher education and (b) the national push to increase interest and graduates in the nation's workforce for 21st century advanced-manufacturing jobs. Based on current national data trends, it has been predicted that the U.S. manufacturing sector will continue to experience a sizeable gap between the talent needed for growth and available talent (Deloitte & Manufacturing Institute, 2015). The skills gap can be attributed to a larger number of baby boomers retiring from the workforce and the technological advancements in manufacturing that have led to economic expansion. To fill this skills gap for middle-skill positions, college administrators need updated research so they can develop and implement programs for this growing and unique population. This research project explored engagement experiences that contributed to or served as barriers for adult ELL student success.

This research is highly significant because, although a large majority of adult ELL students enter career and technical training programs at community colleges, there is limited

research on their engagement experiences. For community college administrators, it is imperative to have a grasp on the best approaches to engage this unique student population so they can design and implement engagement-oriented programs, policy, and practices to promote student success. The themes identified were built on the limited available literature specifically on adult ELL students.

Theoretical Framework

Adult learning theory (Knowles, 1980) and student involvement theory (Astin, 1984) guided the research methodology as well as assisted in the design of the data collection methods (interviews, observations, and artifacts) and analysis of the data. Adult learning, or andragogy, as termed by Knowles (“Hidden Curriculum,” 2014), refers to any form of adult learning (Kearsley, 2010). Knowles, Swanson, and Holton (2005) argued that there are basic principles to consider when teaching adults, and they presented a set of assumptions about how adults learn. The six key principles of adult learning outlined by Knowles et al. are as follows:

1. Adults are internally motivated and self-directed.
2. Adults bring life experiences and knowledge to learning experiences.
3. Adults are goal-oriented.
4. Adults are relevance-oriented.
5. Adults are practical.
6. Adult learners like to be respected.

Gerogogy, a form of teaching based on Knowles’s adult learning theory (Hayes, 2005), is focused specifically on older adults, following the argument that older adults learn differently from younger adults. Adult learning theory has been applied as a theoretical and

methodological framework in the designing of curriculum, health training, and financial training (Carlan, 2001). In education, adult learning theory has guided researchers as they have studied adult students in higher education, particularly at community colleges and those colleges that enroll a high number of non-traditional adult students.

Astin (1984), in his student involvement theory, described the importance of student involvement in college. He pointed out that students learn by becoming involved and argued that the “best” way to involve students in learning and in college life is to increase personal contact between faculty and students (p. 162). Similarly, Tinto (1997) argued that, for community college students, the classroom is the only place that offers an integrated social and academic experience. Involvement opportunities are believed to assist students with their personal and professional growth and development, including moral and identity development (Evans, 2003).

Research Design

Crotty (1998) defined research methods as tools used to carry out the research and analyze data in relationship to the research question. A constructivist epistemological lens and a postmodernist theoretical perspective were adopted for this study. The goal of this study was to listen to and directly collect the participants’ rich, deep, engagement experiences and the meanings the participants assigned to these experiences. This study adopted a phenomenological research approach, including semistructured interviews and observations. The data collected were analyzed, and themes appropriately identified and coded.

Constructivism Epistemology

Contrary to the “straitjacketed” approach to research, for which conventional meanings are placed on research objects, a constructivist epistemology approach, in the mode of the *bricoleur*, requires one to view objects with openness for potentially new or richer meanings (Crotty, 1998). In a constructivist epistemology, the researcher is able to identify the “meaning-making activity of the individual mind” (Crotty, 1998, p. 58) compared to a constructionism perspective, where the emphasis is on “the collective generation [and transmission] of meaning (Crotty, 1998, p. 58). For this study, a constructivist epistemological lens fit because of the goal to identify the constructed meanings developed by participants through their individual engagement experiences rather than by discovery (Crotty, 1998).

Postmodern Theoretical Perspective

Esterberg (2002) defined postmodernism as an approach that is centered on multiple realities and values each variance of knowing equally. As noted by Maxwell (2013), Bernstein (1992), Kvale (1995), and Rosenau (1992) pointed out that the postmodernist perspective “rejects the idea of universal, overriding metanarratives that define a single correct understanding of something” (p. 6). The postmodernist view fit this study’s goal to understand the multiple perspectives set within the conditions of the world today and in the multiple perspectives of class, race, gender, and other affiliations (Creswell, 2013) among adult ELL student populations. In using a postmodernist theoretical perspective, this research identified the existing hierarchies and conditions that marginalized adult non-native ELL student (the “other”) engagement experiences.

Phenomenology

Simply put, phenomenology is the study of essences (Merleau-Ponty, 1962). As a qualitative tradition of inquiry, phenomenology aims at transforming “lived experiences into textual expression of its essence in such a way that the effect of the text is at once a reflexive reliving and reflective appropriation of something meaningful” (Van Manen, 1997, p. 36). This is accomplished by having participants share their stories of the phenomenon of interest either in “long interviews” with researchers (Moustakas, 1994) or in writing “lived experience descriptions” (Van Manen, 1997). In pursuit of meaning, the interactive nature of interviews and inductive knowledge from data analysis leads to describing how people assign meanings to particular events. Eckartsberg (1986, as cited in Moustakas, 1994) outlined empirical phenomenological studies as follows:

Step 1: The problem and question formulation—the phenomenon, whereby the researcher focuses on an investigation and formulates a question understandable to others.

Step 2: The data generation situation—the protocol life text, whereby the researcher begins a descriptive narrative.

Step 3: The data analysis—explication and interpretation of the data once collected.

Edmund Husserl, considered the founder of phenomenology, argued that knowledge based on intuition and essence preceded empirical knowledge and all genuine and scientific knowledge rests on inner evidence (Moustakas, 1994, p. 26). Hegel referred to phenomenology as knowledge as it appears to consciousness—the science of describing what one perceives, senses, and knows in one’s immediate awareness and experience (Moustakas, 1994, p. 26).

In phenomenological research, the goal is to “lay bare and exhibit” the ground of a given experience—the phenomenon—and attempt to preserve it in its lived entirety (Heidegger, 1962). In phenomenological research, genuine data are collected mostly through personal accounts of life events, historical text/video, audio, print, pictures, observations, and meaning making attached to the experience by participants. For this study, I collected the accounts of engagement experiences of adult ELL students through face-to-face semistructured interviews and I constructed the meaning of these experiences.

Methods

Crotty (1998) defined research method as tools used to carry out the research and analyze data in relationship to the research question. Derived from subfields of the disciplines of sociology, psychology, and anthropology, qualitative research inquiry also draws from such diverse disciplines as history and biography, philosophy, literature, and curriculum criticism (Sherman & Webb, 1988). The naturalistic nature of qualitative research is a distinction between it and quantitative research, which is often experimental and attempts to form or identify correlations. The data collection method for this study, designed to understand the engagement experiences of adult ELL students, used mainly semistructured interviews with and observations of six participants. After the data were collected, data analysis included coding themes.

Definitions of Terms

For this study, the terms used were defined as follows:

Adult learner: Although it is a challenge to have one single definition for adult student because of the many different classifications of adult learners, for this research, an adult learner was defined as an individual age 25 years or older and enrolled in

postsecondary learning (Voorhees & Lingenfelter, 2003) leading to a certificate, diploma, or degree. For this dissertation, the terms adult learner and nontraditional student will be used interchangeably. Nontraditional students often are students with any of the following characteristics: has delayed enrollment, attends part time, works full time while enrolled, is considered financially independent for purposes of determining financial aid, has dependents other than a spouse, is a single parent, and/or does not have a high school diploma (Wirt et al., 2003).

Advanced manufacturing: Advanced manufacturing can be defined in many different ways, depending on the business or industry. Battelle's Technology Partnership Practice (2005) identified advanced manufacturing as highly specialized traded sector or economic base industries that use automation precision machinery systems to drive economic growth. Some of these industries, identified by Battelle's Technology Partnership Practice include aerospace and defense, industrial chemicals, construction components, food and food ingredients, printing and packing, and medical drugs and devices. For this study, advanced-manufacturing programs included any academic coursework that involved training of students to use innovative technology to improve products and/or processes; such programs may include welding, tool- and die-making, electronics and robotics automation, and computer-aided drafting.

Community college: Community colleges in the United States are generally 2-year public institutions. Depending on their location, history, and mission, they may be referred to as technical colleges, junior colleges, and city colleges. As higher education institutions, their main focus is to provide tertiary classes leading to certificates, diplomas, and associate's degrees (Mellow & Heelan, 2008). They facilitate

educational opportunity toward a bachelor's degree, workforce training and economic development, adult education, and community services (Dougherty & Townsend, 2006). For this study, a community college is considered a 2-year public institution offering tertiary classes leading to certificates, diplomas, and associate's degrees as well as workforce training and adult education.

English language learner student: Educators and government agencies have used different terminologies and phrases when describing individuals with limited English proficiency. Some of the terms used interchangeably include English as a second language (ESL), English language learners (ELLs), English learners, and limited English proficiency student. Because of the uniqueness and distinct characteristics within this population, such terminologies are used synonymously and can be confusing. Typically, individuals in these categories are from countries, homes, or backgrounds where English is not a primary language, they are not able to communicate fluently or learn effectively in English, and they often require that instructions be modified or specialized in their academic courses ("Hidden Curriculum," 2014). This study adopted the state of Iowa's official definition: A student's language background is in a language other than English, and the student's proficiency in English is such that the probability of the student's academic success in an English-only classroom is below that of an academically successful peer with an English language background.

Midwestern: According to the U.S. Census Bureau (n.d.), there are four geographical regions in the United States; the midwestern region occupies the north-central part of the country and includes 12 states: Illinois, Indiana, Iowa, Kansas, Michigan, Missouri,

Minnesota, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. For this study, the states identified as the midwestern region included Missouri, Nebraska, South Dakota, Minnesota, Wisconsin, Iowa, and Illinois.

Student involvement: According to Astin (1984), student involvement is “the amount of physical and psychological energy that the student devotes to the academic experience” (p. 297). In this study, student involvement and student engagement were used interchangeably to explore and understand the adult ELL experiences on campus and the meanings students assign to these experiences.

Summary

The data support the trend of a steady increase in foreign-born adults in the United States. Most of these foreign-born adults come from varied educational backgrounds and are mostly nonnative English speakers. Coupled with the predicted ongoing shortage of trained mid-level skilled workers in the manufacturing sector, it is essential that these new immigrants receive job training so they can become productive and enjoy upward economic mobility. There is a well-established body of scholarship on student engagement that supports the argument that students engaged in the academic and social experience are successful. However, the majority of these studies have focused on mostly White traditional native-born and international students at 4-year universities. There has been a lack of studies that focus on the engagement experiences of adult nonnative English speaking students. Specifically, there is limited literature on the backgrounds, academic experiences, and levels of involvement, knowledge, and overall perception of adult ELL students in the community college environment. Administrators need to change their strategies and structures to meet the needs of adult learners (Compton, Cox, & Laanan, 2006) and to reflect the new

perspectives on campus rather than a “student deficit” model whereby adult ELL students are asked to adapt themselves to the college and its rules (Bowl, 2001).

This qualitative research study, situated within a “phenomenology of practice” (Van Manen, 2014), a method developed specifically for studying educational environments *in situ* (Van Manen, 1990), adds to the available literature about the perceived engagement practices and social networks that support and promote success for adult ELL students in advanced-manufacturing programs. The next chapter provides a literature review of adult learners, including Knowles’s (1968, as cited in Holton, Swanson, & Naquin, 2001) perspective on adult learning/andragogy, and adult English language learners. Chapter 2 also covers literature reviews of Astin’s (1984) student engagement theory, community colleges (historical context and enrollment trends for adult and immigrant students), and advanced manufacturing.

Chapter 3 includes a description of the methodology I adopted for this study (a brief, detailed explanation of the methodological process is included in Chapter 1). I adopted a constructivist epistemological lens for the theoretical framework and a phenomenological approach, which included individual face-to-face interviews and classroom and laboratory (lab) observations. Also detailed in chapter 3 is additional information about the research site, participants, data analysis, credibility and trustworthiness, researcher background and positionality, and ethical issues I was confronted with during the study.

Chapter 4 comprises a presentation of the findings of this study, including a participant summary; rich, thick textual descriptions; the categorical coding matrix; findings from the data analysis; and the themes that emerged. Chapter 5 includes conclusions drawn from the findings, delimitations and limitations of the study, ethical considerations,

implications for policy and practice, recommendations for future research, and a reflexivity statement.

CHAPTER 2. LITERATURE REVIEW

In reviewing available literature, it was clear that there was limited literature on adult ELL students in the community college setting. Although there has been much research on both adult student learners and student engagement in separate contexts, a research gap exists for adult ELL student engagement experiences in postsecondary education. This study's goal was to fill the research gap regarding engagement experiences of adult ELL students in advanced manufacturing. Within the adult student population alone there are unique demographics, including adult veterans, adult students with mental health conditions, and adult student immigrants. Often, their goal on campus may be different and unique, which in turn may direct their engagement expectations and experiences in different and unique ways. There is limited research that has combined adult ELL students and adult ELL students' engagement experiences in advanced-manufacturing training programs. The literature review for this study included: (a) the general adult student population, (b) student engagement, (c) the community college context, and (d) advanced manufacturing. Empirical sources were used, including doctoral dissertations, peer-reviewed journal articles, unpublished manuscripts, conference and meeting paper presentations, scholarly books, and data from nationally recognized data systems (Integrated Post-Secondary Education Data System, U.S. Department of Education, U.S. Department of Labor, *The Chronicle of Higher Education*, Iowa Department of Education, Association of Iowa Workforce Partners, Pew Research Center).

Adult Learners

Adult learners can be found everywhere and are learning every day. Every individual at some point in his or her lifetime becomes an adult learner. Attitudes toward older students

have changed over time beginning in the 1960s following World War II, the implementation of the General Educational Development (GED), the Serviceman's Readjustment Act of 1944 (GI Bill; Maehl, 2004), as well as the women's and civil rights movements (Kasworm, 2003). With the opportunity to complete their high school diploma and support from the GI Bill, coupled with other historic events and public policies (Kasworm, 2003) as well as psychologists' and social scientists' views that adulthood is a developmental period (Knowles, 1980), adult learners were able to access higher education through the postwar community college movement.

Projections by the National Center for Education Statistics ([NCES], 2009) showed that, out of the over 18 million college students enrolled in 2007, 38% were 25 years of age or older. Adult students "represent a growing population in the shifting terrain of higher education" and "have increased dramatically in both absolute number and in the percentage of the student population in relation to younger adults (Kasworm, 2003, p. 3). A report from NCES projected a stabilization or increase in this number between 2007 and 2018 (Hussar & Bailey, 2009, p. 44). Because of the different classifications of adult learners, it is a challenge to obtain an accurate number of adult students enrolled in the nation's colleges that fall into this category. Choy (2002) pointed out that 73% of students may be considered nontraditional when the term "nontraditional student" is used broadly to include seven characteristics that are often not associated with college attendance: financially independence, delayed entry into college after high school, having one or more dependents, being a single parent, full-time employment, part-time college enrollment, and not having a high school diploma.

Adult learners enroll in college for many reasons including “the changing beliefs by adults and society about the importance of a college credential linked to work stability, financial support, and related life opportunities (Kasworm, 2003, p. 4). For other adult students, the decision to enroll in college may be due to a “divorce, children entering school, a recent job loss, or a denied job promotion due to the lack of a college degree (Kasworm, 2002, as cited in Kasworm, 2003). Although some adult students are motivated to pursue degrees at prestigious colleges that may have unfriendly environment for adult students, most students’ choice of school is typically based on “accessibility, relevant to current life needs, cost-effective, flexible in course scheduling, and supportive adult lifestyle commitments” (Kasworm, 2003, p. 7).

There are many reasons—including an aging and increasingly diverse population, constant shifting of workplace demands and the global economy, the rapid pace of technological changes (Ross-Gordon, 2011), and the growth and projected growth of this population on college campuses—that makes it critical to learn how adults learn best. Adult learning theory has been adopted for many research projects to study informal and formal learning. Compared to formal learning, for which courses and curricula may be mapped and taught through structured and potentially complex ways in a traditional classroom, informal learning involves the pursuit of understanding, knowledge, or skill that occurs without the presence of externally imposed curricular criteria (Livingstone, 2001).

Tisdell and Taylor (2000) pointed out that an important aspect of adult education practice is the educator’s “educational philosophy” (p. 6). Equally important, Tisdell and Taylor argued, is the adult learner’s educational philosophy. Having an understanding of students’ philosophies helps educators “better negotiate the everyday realities of life with

adult learners” (p. 6) and allows educators to adjust their classroom behaviors to support adult students. Tisdell and Taylor asked adult educators to reflect on the following questions:

1. What is the purpose of education?
2. What is the role of the adult education?
3. What is the role of students or adult learners in the classroom?
4. What is your conceptualization of differences among adult learners?
5. What is your worldview, or the primary lens, you use in analyzing human needs?

The answers to these questions, according to Tisdell and Taylor, depends on the educator’s philosophical lens, including liberalism, progressivism, humanism, behaviorism, and radicalism.

Carpenter (2012) conducted a study of adult females adopting a Marxist-feminist theoretical lens. She argued that a Marxist-feminist theory of adult learning offers a significant contribution to feminist pedagogical debates concerning the nature of experience and learning. Carpenter has explored the core relations of learning from a Marxist-feminist perspective and has charted a feminist direction for the Marxist theorization of adult learning. From Carpenter’s theoretical viewpoint, there is a mutually determining relationship between the individual and the social relations (gender, race, class, age, and language), in which the social world is conceptualized as active human practice. These social relations form and inform the experiences of adult learners in their context. Carpenter cited Freire and Vygotsky (AU2007a, AU2007b) in her argument about the uses of dialectical conceptualization in Marxist-feminist theory, which emphasizes internal relations and seeks to explain racism and patriarchy and not just capitalism.

Principles of Adult Learning Theory

Knowles's (1984) andragogical model has emerged as one of the most utilized adult learning models in studying or working with adult learners. The groundbreaking model has "stood for many years as a central model of adult learning" and "sparked much subsequent research and controversy (Holton et al., 2001, p. 118). Although its core principles have been applied to practice and research, the theory has been described in many forms including as guidelines, a philosophy, and a set of assumptions (Holton et al., 2001, p. 119). Fidishun (2000) pointed out that adult learners are often self-directed, find learning more intrinsically joyful, and enroll in college with a goal in mind. They resist learning with any feeling of imposition of information, ideas, or actions on them (Fidishun, 2000). Because they need to have their life experiences acknowledged, it is important to facilitate reflective learning opportunities that will allow adult learners to review and move from their own biases or habits based on life experiences to a new understanding of the information presented (Fidishun, 2000).

Andragogy is particularly appropriate for this study because of the goal to understand the engagement experiences and perceptions of adult ELL students and how these experiences support student learning. For adult learners, who are often mature and committed to whatever they may be learning, learning is embedded in everyday life, including work, family, and community activities, and takes place at libraries, hospitals, museums, religious institutions, online, as well as in formal environments such as at universities and colleges (Merriam & Bierema, 2013). Adult learners enroll for "a specific purpose, and possess a sense of urgency in the pursuit of those objectives" (Carlan, 2001, p. 169). Adult student learners face a unique set of challenges when deciding to pursue a

college training program. For adult learners, the demands of family, work, and other commitments may affect their success and result in them giving up their educational pursuits before completing a degree program or acquiring the knowledge. Adult learners also feel a great deal of anxiety about learning and are successful when they feel that whatever they are learning is needed to cope more satisfyingly with real-life tasks or problems (Knowles, 1980). Knowles, Holton, and Swanson (1998) formulated the concept that adults learn best in informal, comfortable, flexible, nonthreatening settings. Any other setting could lead to adult undergraduates feeling out of place (Kasworm, 2010) and feel like “visitors” on campus (Tinto, 1993, p. 64).

Unfortunately for some adult students, the first steps in the enrollment process—application, financial aid, academic and career assessments, and class scheduling—is where their dreams of achieving a postsecondary education end. The experiences they encounter while on campus may also be daunting and discouraging. Besides personal factors, such as family and health, adult student learners, especially those who may also be the first in their family to attend college, lack the cultural capital needed to successfully navigate through an institution’s policies and practices. While on campus, technology, tutoring, faculty and peer interaction, and formal and informal social networks can present barriers.

Adult English Language Learners

Due to economic, political, and civil unrest in other parts of the world, the United States and Europe continue to experience an increased number of immigrants among their residents. The majority of these migrants come from countries where English is not a primary language. Coupled with the expected increase in the number of baby boomers reaching retirement in the United States and the need for colleges to produce employable,

work-ready graduates (Cooper, Orrell, & Bowden, 2010), it is essential that community colleges identify and develop programs that are suitable to train these new residents.

Knowles (1984) pointed out that, although there has been a general agreement among adult educators that adult learners are different from their younger peers, he could not find a single book that helped him conduct a program for his adult students. Today, there are many literature resources and guidelines about adult learning, including theoretical analyses about how adults learn best. However, there has been a limited number or lack of studies that have focused on adult learners whose primary language is not English. How do adult ELL students learn best? Do the adult learner principles identified above apply to adult ELL students? Are there different engagement experiences and expectations within this group based on family makeup, employment status, language skills, region of origin, age, gender, previous education, etc.?

Ramírez Esparza et al. (2012) conducted a study of English learners with little education in their home country to understand the process and mechanisms associated with learning. They measured the sociointeractive behaviors and the expression of personality behaviors in learners who attended classes to learn English as a second language (ESL), and they analyzed the relationship between sociointeractive behaviors and personality with literacy test scores. Their study showed that learners with a low level of education behaved differently in the classroom than did learners with higher levels education and that sociointeractive behavior and personality were related to literacy test scores. These students, when faced with complex tasks in the classroom, may feel a sense of alienation (Lee, Butler, & Tippins, 2007) and fear of speaking in the classroom (Wassell, Hawrylak, & LaVan 2010).

As the United States continues to experience an influx of diverse migrants with limited English skills, mostly adult learners with little education and low income, it is critical for educators to learn how these new residents learn best.

Student Engagement

Astin's student involvement theory—the amount of physical and psychological energy that students devote to their academic experience (Astin, 1999, as cited in Burlison, 2015), includes the amount of time spent on campus by students, including involvement in extracurricular activities, student clubs, and academic studies. Student involvement has positive effects on academic achievement and persistence (Kuh, Kinzie, Schuh, Whitt, & Associates, 2005), and students who feel connected to their institution are more likely to remain at that institution (Tinto, 2004). Student engagement may include the time students spend on curricular and cocurricular activities as well as the institution's programs aimed at involving students in these activities (Kuh, 2003). It has also been argued that a connection between academic advising and other student support services on campus promotes student success. Astin (1993) claimed that student–faculty interactions at 4-year institutions are positively correlated with the development and achievements of students. It has also been argued that student–faculty interaction can predict enrollment credits and, in turn, predict student persistence (Nakajima, Dembo, & Mossler, 2012). However, Washburn (2008) found that only 12.5% of teachers with ELL students in their classrooms had participated in 8 hours of training or professional development on how to work with ELL students.

The primary involvement or interaction for community college students, who are often also nontraditional students, typically occurs inside the classroom (Wirt & Jaeger, 2014). Although nontraditional students interact to some extent with the college

environment, Metzner and Bean (1987) pointed out that they spend considerable time engaging in their own individual surroundings while enrolled in college. Students often enroll part time, have employment responsibilities, have limited involvement in student activities, and are nonresidential students (Wirt & Jaeger, 2014). Adult ELL students' only daily contact on campus may be their faculty member. High-quality faculty are essential to the effectiveness of ESL programs in terms of student learning gains, retention, and transition to regular academic classes (Teranishi, Suarez-Orozco, & Suarez-Orozco, 2011). Nakajima et al. (2012) found in their research of ESL students that student persistence involved multiple factors that included age, work hours, financial aid, credit hours, and English proficiency.

Zhang and Pelttari (2014) studied the emotions and needs of ELLs and focused on the preparation and training of teachers in working with this population. Their study found that teacher candidates developed empathy and extrapolated the message that ELL students in classrooms in the United States face serious but surmountable challenges that take time to overcome. As a result of their research, they recommended that ESL teacher preparation programs should include language requirements and interactions between teacher candidates and language learners.

For traditional-age students, there is research evidence that social involvement is connected to academic success (Astin, 1993; Tinto, 1993). Peer interaction opportunities through orientation, learning communities, first-year seminars, internships, and mentoring (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007) may be helpful in the overall perception of the student on campus. For adult students, engagement in student activities may not be a fundamental aspect to their success because they are goal oriented (Knowles et al., 2005) and

may rather focus on their academic experience. However, their interaction with other students may help them develop peer relationships that may, in turn, lead to social development and academic success (Astin, 1984). Avalos and Pavel (1993) pointed out that high quality academic advising is a strong positive determinant of student persistence and that, conversely, inadequate advice is the single strongest negative determinant.

The Community College

Historical Context

The very first partnership to establish what is usually referred to today as a community college was between William Rainey Harper, then-president of University of Chicago, and J. Stanley Brown, then-principal at Joliet High School. This partnership in 1901 established Joliet Junior College, which was annexed to Joliet High School. Joliet Junior College offered Joliet High School graduates the opportunity to complete an additional 2 years of postsecondary coursework that would count toward their first 2 years of a 4-year degree. Students were awarded a junior certificate, currently the associate's degree, once the 2 years of credits were completed (Beach, 2011).

Enrollment Trends for Immigrants and Adult Students

As community colleges have evolved, their mission has developed into providing the masses with access to higher education (Cohen & Brawer, 1989). For minorities, the working class, and immigrant students, community colleges have become the main avenue to higher education (Richardson & Bender, 1987). In 2007–2008, about 23% of all U.S. undergraduates were immigrants (Staklis & Horn, 2012). A report by the American Association of Community Colleges ([AACC], 2012a) showed that 44% of U.S. undergraduates, a total of 13 million students (8 million credit students and 5 million

noncredit students), were served by 1,132 community colleges in the United States.

Community colleges enroll more immigrant students than does any other type of postsecondary institution because they offer an important venue to meet the educational need of immigrants (Teranishi et al., 2011). Nationally, immigrant Hispanic and Asian students enrolled in community colleges at higher rates (54% and 51%, respectively) compared to 44% for all undergraduates (Staklis & Horn, 2012). For adult immigrants who want to obtain an affordable postsecondary education but have family or relocation barriers, community colleges are well suited for this objective. They cost much less than do 4-year colleges, are often conveniently located, feature open admissions, and accommodate students who work or have a family (Teranishi et al., 2011).

Community colleges prepare immigrants, including those learning English language skills, for the labor market and allow them to improve their financial condition as well as complete a high school diploma and adult basic education. The local community college may also provide a path to American higher education leading to a bachelor's degree and beyond. They are affordable, accessible, offer flexible class schedules, and limit the anthropomorphic characteristics of friendliness, indifference, or condescending attributes of a college campus (Baird, 2001).

Community colleges also continue to play a major role in the education of adult students. Adult learners have become an important and historically notable part of the community college constituency (Williams & Southers, 2010). Many adult learners attend community colleges to strengthen their skills and prepare to re-enter the workforce (Conway, 2012). Community colleges have become the choice for many adult learners because of their adult-centered environments, their flexible practices, and their ability to relate to each adult

student as an individual (Mancuso, 2001). Some of the flexible services that adult learners may benefit from include extended hours and online options (Chickering & Reisser, 1993). These institutions provide a path to many postsecondary education opportunities for adult students, including students from ELL backgrounds.

On the economic development front, community colleges have recently partnered with local and federal governments on initiatives for short-term programs (Knowles, 1984; Laanan, 2003) and for seamless pathways from K–12 to community colleges and the workforce (AACC, 2012b). They are major partners in the development and sustainability of their communities and districts (Miller & Tuttle, 2007) and are able to easily adapt to the changing needs of its diverse students and local industries on short notice. Community colleges are able to produce employable and work-ready graduates (Cooper, Orrell, & Bowden, 2010) within a short period of time. Besides enjoying economic mobility, an educated immigrant has social benefits, including reduction in poverty, health problems, incarceration, and unemployment as well as an increase in voting and volunteerism (Tinto, 2012).

Advanced Manufacturing

In the United States, manufacturing provides high wage jobs, commercial innovation, is a key factor in reducing the trade deficit, and makes a disproportionately large contribution to environmental sustainability (Helper, Krueger, & Wial, 2012). In recent years, there has been a renewed cross-sector, local, state, and national effort in the United States to promote and invest in advanced manufacturing. The goal of this effort, which has brought together academia, labor, and industry, is mainly to create high quality manufacturing jobs and enhance America's economy and global competitiveness. The manufacturing industry is

currently confronted with a shortage of skilled labor needed to replace the large percentage of retiring baby boomers.

The United States continues to experience large workforce shortages in advanced manufacturing due to a decline in numbers of the native-born population, baby boomer retirements, public perception of advanced manufacturing, and the advancement and automation in advanced manufacturing. The skills gap is expected to affect Iowa and other midwestern states that have experienced a decline in their native population as well as in the number of residents with the needed skills and education to fill positions. In Iowa alone, 50% of jobs statewide are mid-level skilled jobs, but only 33% of the labor market has the necessary skills to fill these jobs. Furthermore, by 2018, about three out of five jobs in Iowa (62%, up from 50%) are expected to require some training beyond high school (Association of Iowa Workforce Partners, 2013).

The state of Iowa has been and continues to be recognized as a leader in agriculture production (corn, soybeans, hogs, etc.); however, advanced manufacturing has taken the lead as the state's largest industry. Although the number of manufacturing jobs in Iowa decreased from one out of five jobs in 1982 to one out of six jobs in 2002 (Laanan, Compton, & Friedel, 2006), Iowa ranks 11th in the percentage of gross domestic product in manufacturing, making Iowa one of the leaders in this field (Iowa Economic Development, 2014). In Iowa, advanced manufacturing:

- contributes \$28 billion annually to the state's economy;
- represents almost 18% of the state's gross domestic product;

- has more than 4,000 employers, including those employed at John Deere, 3M, ALCOA, Vermeer, and Pella Corporation, who employ more than 210,000 residents (13.5% of total employment);
- represents 78% of all patents in the state;
- exports about \$15 billion worth of manufactured and value-added goods, including tractors, bulldozers, insecticides, and tractor parts; and
- relies on a network of 15 community colleges, major state research universities, and more than 70 private colleges that graduate more than 2,000 engineers yearly.

With the continued increase of immigrants among the U.S. population, immigrants will constitute a significant part of the U.S. workforce. Coupled with the predicted skills gap for the mid-level skilled workforce in advanced manufacturing, it is essential that colleges and communities do more to accommodate and train these new immigrants to contribute to the U.S. economy. Most importantly, colleges and communities need to have programs that will support this unique and vulnerable group of students.

CHAPTER 3. METHODOLOGY

Characteristics of Qualitative Research

Crotty (1998) defined a research method as a set of tools used to carry out research and to analyze data in relationship to the research question. Derived from subfields of the disciplines of sociology, psychology, and anthropology, qualitative research inquiry also draws from diverse disciplines such as history, biography, philosophy, literature, and curriculum criticism (Sherman & Webb, 1988). The naturalistic nature of qualitative research is a distinction between it and quantitative research, which is often experimental and attempts to form or identify correlations.

Although the different approaches within qualitative research all fall under the qualitative inquiry umbrella, these different approaches can be vividly displayed by exploring their usage throughout the process of research, including the introduction to a study through its purpose and research questions, data analysis, report writing, and standards of validation and evaluation (Creswell, 2013). The variations within qualitative research inquiry can be baffling when trying to determine whether an ethnographic, case study, phenomenological, narrative, or grounded theory approach is the best fit for a research project. Issues that arise for qualitative researchers, compared to their quantitative peers, include reliability, credibility, and internal and external validity.

In terms of the research instrument, the qualitative researcher has to decide which of the forms of qualitative inquiry methods to adopt, which will be the best method, where to collect the data, and how to analyze the data for the study. For example, for social justice research, adopting a critical theory approach may fit best with a qualitative approach. Critical theory can explain the socioeconomic and political marginalization of certain groups

in society, and a qualitative research method provides a forum for these groups' voices to be heard against the dominant ideology. Also, as the research instrument, "the research relationships are the means by which the research gets done (Maxwell, 2013, p. 91). The relationships developed between the researcher and the research participants and institutional gatekeeper have an impact on the research design, including the selection of participants and data collection.

Philosophical Assumptions

Theoretical Framework

Silver (1983) conceptualized theory as a unique way of perceiving reality, an expression of someone's profound insights into some aspect of nature, and a fresh and different perception of an aspect of the world. Kerlinger (1986) defined theory as "a set of interrelated constructs, definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting phenomena" (p. 9). Anfara and Mertz (2015) pointed out that qualitative researchers often have trouble identifying a theoretical framework and understanding its pervasive effects on the process of conducting qualitative research. There is not an unvarying order in which the different tasks or components must be arranged, nor is there a linear relationship among the components of a qualitative research design (Maxwell, 2013). However, it is important to identify a tradition of inquiry before selecting the appropriate theoretical framework and epistemology (Personal communication, Lyn Brodersen, February 18, 2015).

The "collecting and analyzing of data, developments and modifying theory, elaborating or refocusing the research questions, and identifying and addressing validity

threats are usually all going on more or less simultaneously, each influencing all of the others” (Maxwell, 2013, p. 2). Merriam (2009) pointed out that knowledge of previous research and theory helps researchers focus on the problem of interest and leads to the selection of the correct theoretical framework and research questions. In this phenomenological research study, I investigated the lived experiences of adult ELLs in an advanced-manufacturing training program at a midwestern community college.

Cultural Constructivism Epistemology

Contrary to the straitjacketed approach to research, which places conventional meanings on research objects, a constructivist epistemology approach, in the mode of the *bricoleur*, requires one to view objects with openness for potential new or richer meaning (Crotty, 1998). As Levi-Strauss (1966) expressed:

Consider him at work and excited by his project. His first practical step is retrospective. He has to turn back to an already existent set made up of tools and materials to consider or reconsider what it contains and, finally and above all, to engage in a sort of dialogue with it and, before choosing between them, to index the possible answers which the whole set can offer to his problem. He interrogates all the heterogeneous objects of which his treasury is composed to discover what each of them could “signify,” and so contribute to the definition of a set which has yet to materialize but which will ultimately differ from the instrumental set only in the internal disposition of its parts. (p. 18)

In a constructivist epistemology, the researcher is able to identify the “meaning-making activity of the individual mind” (Crotty, 1998, p. 58) compared to a constructionism perspective, for which the emphasis is on “the collective generation [and transmission] of

meaning” (Crotty, 1998, p. 58). With a constructivist epistemological approach, the sense and meaning making by individuals of their experiences are valued and respected over the meaning society may apply to the experience. For example,

A particular cube of oak could be a wedge to make up for the inadequate length of a plank of pine or it could be a pedestal—which would allow the grain and polish of the old wood to show to advantage. In one case it will serve as extension, in the other as material. But the possibilities always remain limited by the particular history of each piece and by those of its features which are already determined by the use for which it was originally intended or the modifications it has undergone for other purposes.

(Levi-Strauss, 1966, pp. 18–19)

For this study, a cultural constructivist epistemological lens fit because of the goal to identify the constructed meanings developed by participants through their individual engagement experiences rather than by discovery (Crotty, 1998). A constructionist discovery and notion blinds us to reality (Wolff, 1989, as cited in Crotty, 1998), restricts and imprisons our thoughts in our own world of construction (Wild, 1955, as cited in Crotty, 1998), and “serves hegemonic interests” (Crotty, 1998, p. 59). As the United States continues to experience an increase among its immigrant population and the number of adult nonnative ELLs who enroll in college, the divergent interpretations of the same phenomena, such as historical and cross cultural comparisons (Crotty, 1998) should be considered. With a constructivist approach and phenomenological method, this study explored and sought to understand the engagement experiences of adult nonnative ELL students “directly and immediately” (Crotty, 1998).

Postmodern Theoretical Perspective

Esterberg (2002) defined postmodernism as an approach centered on multiple realities and valuing each variance of knowing equally. Tisdell (1998) pointed out that postmodernism emphasizes the interactions between the individuals and their social environment and avoids either an individual or a collective focus on learning. As noted by Maxwell (2013), Bernstein (1992), Kvale (1995), and Rosenau (1992) the postmodernist perspective “rejects the idea of universal, overriding metanarratives that define a single correct understanding of something” (p. 6). Although some scholars have regarded postmodernism as the period following modernity (Prasad, 2005), others have viewed this period as an extension of modernity (Bell, 1973), an intensive form of modernity (Best & Keller, 1991), or just a period characterized by rupture from modernity (Sarup, 1993). From a Marxist perspective, Jameson (1992) contended that the postmodernist period is rather a development of late capitalism and marked by a period of hyperconsumption and social decay, and Prasad (2005) argued that most writers of postmodernity discuss the period as a period of cultural and intellectual movement.

The postmodernist view fits this study’s goal to understand the multiple perspectives set within the conditions of the world today and in the multiple perspectives of class, race, gender, and other affiliations (Creswell, 2013) among adult ELL student populations. These adult ELL students may have migrated to the United States due to what Jencks (1989) termed *de-differentiation* or splintering of various boundaries (nations, work, home, etc.). From a postmodernist stand, these individuals are full of potential, affected by their individual cultural experiences and, thus, have a different view and perspective about their experiences. Using a postmodernist theoretical perspective for this study, I identified the existing

hierarchies and conditions that marginalize adult non-native ELL student (the “other”) engagement experiences.

Methodological Approach

Research Questions

Overall, this study was guided by two research questions:

1. What are the perceived on-campus engagement experiences and social networks that support and promote success among adult ELL students in advanced manufacturing?
2. Are there perceived engagement experience issues and barriers for adult ELL students?

Phenomenology

Contrary to the positivist view that objects in the world have meaning prior to and independent of human awareness of them, phenomenologists, from an existentialist point of view, have argued that “human being” means “being in the world” (Crotty 1998).

Phenomenologists argue that the connection between the human experience and its objects makes it impossible to describe objects in isolation from the conscious of the human experiencing it (Crotty, 1998). Intentionality, which mirrors constructionism and was invoked by philosopher Franz Brentano, means that the mind reaches out to, and onto, an object when it “knows” or becomes conscious of an object (Crotty, 1998). Husserl pointed out that “only through the acts of *experiencing* as reflected on do we know anything of the stream of experience and of its necessary relationship to the pure Ego” (Husserl, 1931, pp. 144–145). Phenomenology proposes that we say no “to the meaning system bequeath[ed] to us” and is about “setting that meaning system aside” (Crotty, 1998, p. 82). Husserl (1931)

posited that “phenomenology does not deny the existence of the real world, but instead [seeks] to clarify the *sense* of this world (which everyone accepts) as actually existing” (p. 1). In collecting textually meaningful and essential information about a phenomenon, it is important to gather clear reflectivity on an ability to attend, recognize, and describe with clarity (Moustakas, 1994). Heidegger (1962) warned that the phenomenon, which is constitutive for “appearance” in the sense of making itself known through self-showing, can turn into mere semblance in a private way. In doing so, a phenomenon can appear to provide empirical intuition—genuine and original sense—or conceal part of itself (Heidegger, 1962).

With deep roots in social science research, phenomenology has been adopted for the conduct of research in many other fields, including health, education and curriculum, and religion. In applying phenomenology to a study and understanding the complexities of a particular human experience, researchers are faced with repeatedly reflecting upon an event, or other lived moment, to obtain a comprehensive understanding of how participants experience, interpret, and make meaning of a particular phenomenon (Moustakas, 1994, p. 83). Similar to this study, phenomenology has been adopted for educational research involving the experiences of a diverse and underrepresented group of students. McGlasson and Rubel (2015) completed a phenomenological study that explored the “coming out” experience of seven gay men who were significantly influenced by conservative Christianity in their formative years and who were living as “out” gay men. The research revealed four commonalities in their experience of this phenomenon: (a) realization and acceptance of their gay identity, (b) a reckoning that action was required, (c) a rejection of the oppressive religious authority in their lives, and (d) a reorientation in their pursuit of a healthy spirituality. Adopting a qualitative phenomenological approach allowed the researchers to

understand how the participants made sense of their experiences and how their understanding influenced their behavior (Maxwell, 2013). Similarly, in their study about massive open online courses (MOOCs), Adams, Vargas Madiz, and Mullin (2014) adopted a phenomenological tradition to explore the lived experiences of students who had completed a MOOCs class. The study examined students' accounts of their daily experiences with learning in MOOCs. A phenomenological study is the best fit for these studies because the qualitative research methodology, a "phenomenology of practice" (Van Manen, 2014) was developed specifically to study educational environments *in situ* (Van Manen, 1990).

For this study, I chose a phenomenological approach because of my goal to understand how adult ELL students viewed their engagement experiences. Additionally, this approach turned out to be the best fit because of the theoretical perspective chosen: the postmodernist perspective. The postmodernist perspective is among the theoretical perspectives that "challenge neat and thus exclusionary models of adult learning" (Kilgore, 2001, p. 53). Like the postmodernist philosophical perspective, phenomenology holds that "reality" exists not in some tangible, identifiable outside world but in human consciousness (Prasad, 2005, p. 13). Compared to the positivist approach, both are interpretive traditions that support the view of "human interpretation as the starting point for developing knowledge about the social world" (Prasad, 2005, p. 13) and the argument that different people hold a variety of perspectives on the same phenomena for many reasons, not all of them the logical result of any particular interest (Kilgore, 2001, p. 54); however, neither support social constructs of "*verstehn*" that can imprison us of our own social constructs (Prasad, 2005, p. 16). Adopting a phenomenological approach helped me focus on the subjective experiences and interpretations of these experiences.

Methods

Crotty (1998) defined research methods as tools used to carry out the research and analyze data in relationship to the research question. The naturalistic nature of qualitative research, which focuses in-depth understanding of social and human behavior, is a distinction between it and quantitative research, which is often experimental and concerned with the development and testing of a hypothesis (Wayne, 2010). The data collection method for this phenomenological study with six participants included face-to-face, semistructured and open-ended interviews, classroom and lab observations, and descriptive field notes. Miles and Huberman (1994) cautioned inexperienced qualitative researchers that

highly inductive, loosely designed studies make good sense when experienced researchers have plenty of time and are exploring exotic cultures, understudied phenomena, or very complex social phenomena. But if you're new to qualitative studies and are looking at a better understood phenomenon within a familiar culture or subculture, a loose, inductive design is a waste of time. (p. 17)

Although the caution raised above is a valid one, the single-site nature of the study and the fact that this study used prior theory as guidance helped control some of the issues raised by Miles and Humerman.

The interview method used for this study was adopted because the open-ended questions and semistructured, in-depth interviews allowed for minimal constraints and interview protocol. Due to the inductive nature of this research, it was essential that I stay away from “substantial prior structuring of the methods” because that may have led to inflexibility and “tunnel vision” (Maxwell, 2013, p. 88) in making sense of the data. The semistructured interview method, which is “much less rigid than structured interviews”

(Esterberg, 2002 p. 87), also allowed me to begin analyzing the data early in the data collection process as well as gain participants' own assigned meanings to their experiences. After collecting the data, analysis of data was conducted in two steps, including a period of listening and reading through the data and eventual coding for themes.

Research Site and Participants

This study was conducted at a suburban midwestern community college, Waterline Community College (WCC). In the spring semester of 2015, over 50% of the students enrolled at WCC identified themselves as “another” ethnicity besides White. The site was chosen for the study for three reasons: (a) the diverse adult student population including ELL and veteran students and the high rate of nonnative-born families in that area served by the college, (b) the programs offered by the college, and (c) the initial support from WCC's Institutional Research Board (IRB) staff and gatekeeper. Also, the site was within easy driving distance for me, which allowed me to spend additional time at there.

The nature and goal of this research made it very important to build relationships not only with participants but also with site gatekeepers for access to needed data. For qualitative research, gatekeepers are used to assist the researcher in gaining access and developing trust within the community of study (Hatch, 2002). WCC's IRB staff person was the main gatekeeper for this study. The IRB staff helped with gaining access to the research site, approval to conduct the research (Bailey, Jaggars, & Jenkins, 2015), and identifying a list of potential candidates qualified to be participants. I also worked very closely with and received support services (reservations of rooms for interviews, contacting security to unlock doors, initial tour of campus and buildings, etc.) from the student services department.

To ethically gain the information needed to answer my research questions, I used a purposeful sampling technique to select individuals for this study. Creswell (2002) pointed out that there are five possible goals of purposeful sampling:

1. Achieve representatives or typicality of the settings, individuals, or activities selected.
2. Adequately capture the heterogeneity in the population
3. Deliberately select individuals or cases that are critical for testing the theories chosen or subsequently developed for the study.
4. Establish particular comparisons to illuminate the reasons for differences between settings or individuals and
5. Select groups or participants with whom the researcher can establish most productive relationships to help answer the research questions. (pp. 194–196)

I gave the criteria for participant selection to the gatekeeper to identify 12 initial students who fit those criteria (25 years or older, ELL student, enrolled in advanced manufacturing). Using purposeful sampling, all efforts were made to recruit a diverse group of participants in regard to gender, native country, employment, enrollment status, etc. The goal was to capture the engagement experiences of a range of adult ELL students in advanced manufacturing. Some of the efforts included calling all students and providing them with a 5-day window for interviews at their preferred time and location. The goal was to eliminate any barriers for prospective participants who may have had family and work responsibilities, transportation, and security concerns for being part of the study. There were no specific requests of the gatekeeper to recruit and include representation of specific ethnic, racial, gender, religious, and nationality groups.

Using this sampling technique, I was able to deliberately select six participants who were “uniquely able to be informative because they are expert” (Maxwell, 2013, p. 97) in the area being studied as well as provide “more confidence that the conclusions adequately represent the average members of the populations (Maxwell, 2013, p. 98). A purposefully sampled participant group also enabled me to “establish the most productive relationships” (Maxwell, 2013, p. 99) with each individual participant. A purposeful sampling approach fit best because of the study’s goal to explore and understand this particular phenomenon from the perspective of those who have experienced it.

Six participants were interviewed for this study. In a phenomenological study, there is no specific required number of participants. Creswell (2007) pointed out that the number of participants should be sufficient enough to provide information saturation so that adding any participants will not necessarily provide additional information or input. Dukes (1984) and Polkinghorne (1989) argued that the number of participants may vary between a minimum of three and as many as 25 participants. Participants of the study were all enrolled in the college’s advanced-manufacturing technology program and identified themselves on their college application as a nonnative English speaker. I also confirmed these characteristics during the initial stages of the first interviews.

The advance-manufacturing technology programs available at WCC included Computer Aided Drafting, Computer Numerical Control Programming, Mechanical Engineering Technology, Machine Tool Trades, and Welding. The study participants included students in both the first-year and second-year cohorts who had started or completed at least three credits in their program prior to the beginning of the research. Because participant interviews were the main data collection method for this study, it was important

that participants be available for a minimum of 2 hours total between the two interviews and that they were very open and communicative.

Waterline Community College's IRB office requested and reviewed the IRB approval from my home institution, Iowa State University (ISU). After multiple e-mail exchanges between my home and host institutions (see e-mails in Appendix A), the research topic was deemed necessary and appropriate by both WCC's and ISU's IRB offices, and I received a letter from both indicating that the research study at WCC was approved (Appendix A).

Within a day of receiving the approval letter, the site gatekeeper, also a staff member in WCC's IRB office, submitted a list of 12 prospective participants to my secured ISU e-mail account. The list included minimal identifying information including first and last names, college-provided and personal e-mail addresses, and phone numbers of prospective candidates. I sent an e-mail to each of the 12 prospective participants to introduce myself, provide them with an overview of the study, and invite them to become a participant in the research study (Appendix B). The participant consent and participant observation consent forms (Appendices C and D) were attached to each e-mail for review, further discussion, and signatures at the initial face-to-face interview. Two of the prospective participants replied right away (within an hour) and indicated their interest and available times for a phone call. I called the remaining 10 prospects after I had not heard from them within 24 hours and was able to secure five additional prospective participants for the study (see Appendix E for the phone invitation transcript). Out of the five remaining prospects, three had nonworking telephone numbers and did not reply to my e-mails, one indicated that he or she was very busy and declined to participate in the study, and one said he or should would be available but never followed through with an interview appointment.

Because of the 6-hour drive and the possible complications and barriers, my home institution's IRB office gave me approval to collect the participant consent and observation forms at the initial meeting and first interviews. Out of the seven prospective participants that expressed interest in the study, six were available at dates and times that fit the interview dates. I scheduled initial meetings and interviews with all six prospective participants. The interviews were held over the course of three days, Wednesday through Friday, between 10:00 a.m. and 6:00 p.m., and all were conducted in a classroom. Because my last interview appointment was at 6:00 p.m., I was able to join evening classes and a lab for observations.

At the initial meeting with participants, I (a) further explained the purpose of the study, (b) explained what the study entailed (study period and commitment, interview dates and times, etc.), (c) reviewed participant consent and observation forms, and (d) collected consent signatures from each participant. Participants were allowed to return consent forms at a later time and reschedule interviews if they felt they needed more time to make a decision. All the participants consented, signed the consent and observation forms, and were advised of their right to discontinue participating at will during any point in the study.

After the consents were cleared, I spent the first 10 minutes chatting with each participant in an effort to get to know and build a relationship with him. Some common experiences and interests between each of the participants and me were our shared interests in soccer and my own personal experience as an immigrant and adult student. My 13-year professional experience working with diverse community college students in advanced-manufacturing programs also helped build a trusting relationship between participants and me. Besides the semistructured interviews, the data for this study were collected through classroom and lab observations and reflective journals.

Participant Profiles

The following six participant profiles provide a short introduction to each of the adult ELL students interviewed for this study. Each profile consists of three descriptive components (family, educational background, and college enrollment decisions and experience) that serve the same purpose in each profile. The components reflect the first two components of the interview protocol (Appendix F) and help provide readers with a clear understanding of the textual descriptions in later chapters. The names of participants have been replaced with pseudonyms, and identifying information, including names of native country, faculty, courses, family members, etc., have been omitted to maintain confidentiality. Also, with the consent of participants, parts of the text have been edited to provide better reading and understanding for readers who may not be familiar with nonnative English speakers and their “broken English” accent. Each participant was given a final edited transcript and replied with comments such as: “It looks good,” “Thank you, that’s it,” “I am okay. I think it’s okay,” and “No, I don’t see anything different.”

Avelino

Avelino was in his late 20s, not married, and did not have any children. He was enrolled in the college’s manufacturing program part time and was working full time with a manufacturing company. Avelino was attending college as part of his employer-sponsored apprenticeship program, which was paying for his tuition and books. Avelino sat very calm and relaxed, and he answered the questions with confidence. He was the most outspoken among all the participants. His English fluency was higher compared to the other participants because he had come to the United States at a younger age. However, it was evident that English was not his first language because of a slight accent. Interestingly,

during the interviews, Avelino changed his accent depending on what he was talking about—home life, school, work, etc.

Avelino moved to the United States with his family at age nine and was the youngest of four boys. He was living at home with his parents so he could “support his parents, pay for the house and expenses, and save money.” Avelino’s older siblings had taken turns staying at home and supporting his parents until they got married and moved out. He was the youngest child and the only one left living with his parents. When asked to share his family background and story, Avelino described:

My father had been coming illegally to the United States. He came here illegally. . . . It was like between ‘71 I think all the way to ‘92, ‘93. He was coming here 20 years illegally. After a while and after those 20 years, he got the opportunity to get his green card. He applied for the family and all. . . . In 1996, we got our green cards. I stayed home to finish that school year. [I], my mom, my dad, and two of my sisters and one of my brothers came here. My oldest brother would be . . . 13. . . . My oldest brother, he talked my dad into buying a house. He got the mortgage that he cosigned and all. After a while, he got married. He had his family, so he moved out. My second oldest brother, he stepped in. . . . About six years ago, he got married. He moved out. Now I’m there. I’m the one . . . my sisters they all got married. My brothers all got married, they moved out. Now I’m the one. I got some of my buddies from high school, about a year or two after, they were like, “You know, hey, let’s get our own place and live on our own.” I was thinking about that, but then [got to] thinking, “Who’s going to help my dad with the mortgage?”

Avelino did not enroll in college immediately after high school because he “was not into college and frankly did not know what I wanted to do.” After working at various jobs, he found an entry-level job with a manufacturing company and worked as a technician. His manager identified him and encouraged him to pursue career training at a local college. He visited with a counselor and was helped with the application process. He has maintained good grades while enrolled part time and plans to continue and complete the program. His older siblings had college degrees, but none of them were in technical areas. Neither parent had college or any sort of formal education in the United States.

Rowan

Rowan was in his early 50s. He migrated to the United States 5 years ago from his native country, has remarried, and has two children with his spouse in the United States. He has an older child who lives with his ex-partner in his native country. Among all the participants, his English speaking was slightly less proficient, but we were able to carry on a conversation and understand each other. Rowan came into the interview just after work and before his evening class. He was very calm, sat back, and smiled throughout the interview.

Rowan had completed a civil engineering degree and worked as a professional civil engineer back in his native country. He also had taught classes at a local university in his native country. After migrating to the United States, he worked at various jobs that required no English skills because he realized, “English is a problem for me you know. If I cannot speak and you understand me, how am I going to work?” Rowan learned to speak English growing up and through his university education back in his native country. However, he realized that the pace of English spoken in the United States is faster than what he was used to and that he needed to work on his listening and speaking.

Just like Avelino, Rowan was selected by his employer to complete career training through an employer-sponsored apprenticeship program that paid for his tuition and books. He was enrolled part time due to work and family commitments and was planning to continue and complete the program as a part time student.

Xanthe

Xanthe was in his mid-20s and was enrolled in the college's manufacturing technology program. He sat across from me, relaxed and very confident, and he smiled throughout the interview. He used hand gestures a lot, especially when talking about his experiences with faculty and classmates.

Xanthe moved to the United States 8 years ago with his father just after his 18th birthday and after graduating from high school in his native country. His older brother and mother decided not to migrate to the United States and currently were living in his native country. After arriving in the United States, he lived with his father until his father decided to move to another state. At the time of the interview, he was living with his girlfriend. They met online because "she would not understand me if we met face to face and my English was not good. Now my English is broken so it's a little better. It was not good." Meeting online was easier because they could carry on a conversation without any language barrier.

Xanthe did not enroll in college right away after migrating to the United States because he needed to earn income to support his father, who was sending money back home to Xanthe's mother and older siblings in their native country. His path in formal American education started when his American-born girlfriend helped pick up and complete the enrollment forms for him to begin English language classes. He had always wanted to

receive career training for work. However, he needed to improve his English skills first. He was the first in his extended family in the United States to attend college and was very committed to finishing the diploma. He was paying for his education out of pocket and thus was enrolled part time.

He was planning to continue and complete the program as a part-time student due to his full-time employment commitment, for which he worked as much as 85 hours per week between two jobs. On the day of the interview, Xanthe had received an e-mail and was planning to switch employers so he could increase his hourly pay, lower the number of work hours, and hopefully pick up additional credits at school to shorten his time in college.

Theo

Theo was in his late 30s and had lived in the United States since the age of 13. He arrived for the interview 30 minutes late because he had worked overtime and had an hour before his evening class. He stayed very calm, thought about each question, answered each of them very carefully, and repeated my question to confirm that he was answering it right. Unlike the other participants, Theo maintained eye contact each time he answered a question and became very emotional when answering questions about his engagement experiences on campus and how his background was affecting his ability to connect to the campus. Among the participants, he showed the most emotion during the interviews. Although he was extremely calm, his body language, facial expression, tone of voice, and eye contact showed his concern for the inequality and the two conflicting worlds in which he was living in daily and how this was affecting him and other ELL students in general.

Theo was enrolled part time, attending school two days a week for 3 hours each day. He was employed full time and was driving over 40 miles between work, school, and home.

He admitted that these factors made it difficult for him to have any sort of “meaningful engagement” on campus with faculty and classmates. When asked to tell me about himself, Theo stated simply:

I’m an immigrant. I came to this country when I was 13. I came just [in] time to start school. I started in eighth grade. I struggled but then I just kept going on and on. I went to high school here, too. Pretty much I did what I needed to do and finished. My parents came here with me. It was a big hurricane in my country. . . . The water was so strong that it even destroyed bridges and houses. That was the reason why they came here.

Theo migrated to the United States with his parents and older brother. He had another sibling who chose to stay in his native country and never came to the United States. His father had visited the United States several times to work before deciding to move the family here after a major hurricane in their native country left them homeless. His older brother decided to return and live in their home country after completing high school in the United States. Both older siblings were married and living in their native country with family. Theo stated about his older brother who had moved back,

He did not like it here. To him, the United States was not a place for us to have a future. He was not ready to change and learn English. Learning English meant he was going to stay here and he did not like that.

Theo was single and living at home with his parents so he could support them financially at home. His parents were socializing mostly only with residents in the community from their native country. Theo’s comments and perspective about his life between home and school were as follows:

Language is a problem for me because when I go home, [my parents] are the only people I speak to, and they speak only Spanish. All the movies we watch at home, the TV, the newspaper, and everything, is in Spanish. When I go to work, everybody there also speaks Spanish. For example, I have a friend who has been here in the United States for only 5 years but speaks better English than me. My friend has three younger sisters who were born here and speak English at home with him. He told them if they don't speak English to him at home, then they should not talk to him at all.

Even for you, it would be hard to get around my community, because I would say that 90% of the people speak Spanish. You could go to the hospital, court, stores, anything, [and] there will be a Spanish-speaking person. Then I come to school and I have to change to speak English.

The community where I live . . . is about 20 minutes west from here. It's called [city name]. [My father] is a mechanic, so he is never involved with any other people who don't speak Spanish.

Some people would say that I'm lying but that's happening in the United States. All my dad's customers, they are Hispanic, only [speak] in Spanish. I would not doubt that my dad will refuse to help a Black or a White customer just because of the language barrier.

Sometimes it's hard. I don't know if this happened to you. I spoke Spanish 80% of the week, let's put it that way. All my thoughts are in Spanish, so I watch TV most of the time with my parents, which is Spanish. When I relate with my friends and cousins, it's in Spanish. So sometimes when I come, I try and ask a question

[and] a Spanish word just come[s] out and I can't help myself and have to stop, because I'm so exposed to Spanish and not English. I don't want to make this as an excuse, but I feel that's why I never got better in English. Especially that I only come here two days a week for 2 or 3 hours. It'll be 6 hours a week, 2, 3 hours a day. It's not enough. That's the reason why I mentioned it'll be a good idea to have people like librarians and other staff that speak Spanish so they can help, because it will make it feel like welcome here.

Theo began his eighth-grade year in the United States and completed high school on time. None of his parents completed any formal education in their native country or in the United States. He did not enroll in college right after high school because "high school was very difficult for us [referring to other immigrant students in his high school]." He pointed out that, after migrating to the United States at 13 years of age, adjusting to the American educational system, classroom culture, socialization, and language were all major problems for him and most of his friends who were also nonnative-born students. Theo pointed out that, although he had completed high school in the United States, he did not feel he was prepared to begin college either academically or socially because he had "about 30 kids in my class and not like college, where it is bigger but you get a lot of help with classes. Really I feel the kids with GED get more help and prepared for college than me."

Theo was the first in his family to enroll in college. For him, the decision to enroll in college did not occur until 6 years after high school. Like Avelino and Rowan, Theo was motivated to receive career training by a supervisor who saw the potential in him, as reflected in Theo's comments below:

Actually, when I finished high school, I was already working my senior year. To be honest, I started to like money, so I did not care about school and for 6 years I only work and played soccer. Then one day, I used to work in a manufacturing company that builds the slot machines for casinos, and I got to a position where I was working with an engineer, and he was actually the one who pushed me to come back to school. That was 3 years ago; that's how I ended up going to college right there. To me, talking to him and him showing confidence in me that I can do it was good.

When asked to describe and share his perception about the college enrollment process, Theo pointed out that the process was easy and attributed this to an advisor who spoke his native language:

It was actually pretty easy because one of the advisors speaks Spanish. He's Black, too. I don't know where he learned Spanish. It was easy for me because we were speaking the same language. He got me to the right people to finish my enrolling. . . . Even though I already spoke English, I couldn't just go around on my own. He really guided me to go to the right people.

He pointed out that the advisor was helpful most importantly because of the language and by directing him to the right people and offices for help. Although the enrollment process was very straightforward, he believed that having additional speakers of his native language on campus would be helpful in the day-to-day engagement with faculty and staff. Theo was planning to continue and complete the program part time.

Astrid

Astrid was in his mid-40s and had migrated to the United States over 10 years previously as a refugee when he was 23 years old. He migrated with his parents and three

younger siblings. He sat calmly, answered all the questions thoughtfully, and made sure I understood the message he was trying to convey by repeatedly leaning forward, signaling with his hands, and asking and nodding his head “do you get it or I can explain.” He could speak and understand English well but had a very strong accent which required me to pay extra attention and ask many follow-up questions for clarification.

Astrid had lived with his parents for 4 years and worked as a maintenance technician for a local hotel. He moved from his parents’ home into an apartment with his then-fiancée after she asked him “to start being serious and start thinking about the future.” His parents moved in with him and his family due to poor health. Astrid married his “girl, who motivates and helps me with school you know because it’s not easy. I did not grow up here.” His spouse was a native-born American. They had two children, ages two and four. He stressed his big extended family background, which included his nuclear family, siblings and their families, his spouse’s family, as well as extended family in his native country. He had not visited his native country since migrating to the United States because of safety issues there but was hoping to reward himself with a trip after graduation from college, saying, “After I graduate and have a good job, I will save some money and take some vacation to my country.” For Astrid, visiting his home country was very important, as he stressed this several times in the interview. Asked to talk about him and family, Astrid stated:

My parents are with us. They are really old; they are sick also; my mom is thus taking regular diabetes and asthma medication. . . . My father has high blood pressure plus hematoma and depression. In the morning, my wife prepares [a] meal for them, she and I go to work, then I come to the college here after work. My wife . . . goes to . . . work and goes home to watch the kids and my parents.

There are many reasons why I am here. I'm lacking what I need to get a job; this I'm getting from here at the school and thus gaining what . . . at least I really need. I have a little bit higher standards . . . so I can get to the end of it. Thus, my goal is not to be a professor, lawyer, like a doctor, doctorate over here. I just want to gain some basic knowledge from here; work on my English, speaking, writing; and at least get some kind of paper certificate to get a good job.

Still I'm happy because I'm getting help from everybody, and thus I don't have any . . . troubles. Thus, I do feel that in America, it is better. . . . Whenever anybody seek[s] help, definitely they will get the help. Let me say I'm a disciplined one and hard worker. I show respect and whenever I face [a] problem, I seek help, ask help from them. . . . I attend the class on time. I do the homework and all assignment[s] and submit it to them [on] time. Because they feel that I am doing hard work like that, they help me.

Astrid completed the equivalent of a bachelor's degree in his native country. He taught math and was counselor at a refugee camp prior to migrating to the United States. His career interest was

in teaching and helping people back home, where I was a professional and work[ed] for the refugee camps as a counselor. I enjoyed it and did that for like 2, 3 years I think. I wanted to build on that, but [I had] to leave.

His interest changed after migrating to the United States mainly due to his limited English skills and the certification required to work as a teacher. A colleague at work, also an immigrant, recommended that he enroll in college to work on his English proficiency. While working on his English proficiency, he met a student who introduced him to the

computer numerical control programming and welding fields. Some of the skills he had learned as a technician were “very close and the class was at night, so I could work the first shift and come to school. It has not been easy because I am old and learning again.” His spouse helped with the college application. He came in to meet with an advisor to set up a class schedule. Like all the other study participants, he was planning to continue as a part-time student, work full time, and seek a job that would provide him with better pay and benefits after graduation.

Kaiaffe

Kaiaffe was in his mid-20s. He came to the United States 4 years earlier as a refugee after a civil war in his home country. He lost his spouse during the civil war and had not remarried since moving to the United States. Kaiaffe sat quietly, laughed mostly throughout the interview, looked tired, and mentioned that he had had a long day already and had a class after the interview to end his day. He was living by himself and had held different jobs with lawn care and snow removal companies and as a school bus driver and janitor with the goal to “make money and . . . just be able to pay my bills, find a better place to live, take care of my family in the [refugee camps].” His motivation to work and survive had taken away any interest in getting married and raising a family because, as he said, “I want to make sure I am ready and maybe find someone [who] will understand my experiences.” When asked about family life before the war and now in the United States, Kaiaffe buried his head between his hands, paused, shook his head, and stated:

“Everything was good. We had everything until the war started. People are not good. They destroyed the country, maybe including myself because we all had to fight the bad people. But Ishalla, I will be okay. You know my wife worked as a teacher. I

was electrician. We [were] just planning to [have] a family. All our families were happy. When the war start[ed], we [men] joined to protect the families. But our village was burned down, and the women raped and some killed. We [ran] away from the village to [another country across] the border. Then I [got] chance to come here.

Kaiaffe decided to begin career training because he was a trained electrician back in his native country and he “wanted to build on what he already [knew] and like[d] to do.” Prior to beginning the program, he completed an assessment in English and scored high enough to begin his diploma program. His training back home was not through formal college training but, rather, was an apprenticeship whereby his parents paid money to a local electrician to train him. He was enrolled in his current program part time, making steady progress, and working full time to support his remaining extended family back in his native country and various refugee camps.

Data Collection Methods

For this study, I adopted more than one data collection strategy, namely, semistructured interviews, classroom and lab observations, and reflective journals. The strategy to combine three data collection methods (a) helped gain a more accurate picture of the engagement experiences of adult ELL students and (b) gave me the opportunity to cross-check participants’ interview comments and actual firsthand actions of participants in the classroom and lab environment with their faculty and peers.

Interviews

Each participant was interviewed at least twice. All six participants had follow-up phone call interviews. The individual, semistructured, logical, open-ended-question

interviews were conducted face to face, audio recorded, and lasted between 45 minutes and an hour. All the interviews were conducted in a classroom, which was agreed upon and preferred by the participants due to proximity to their own classroom. I did not expect language to be an issue because students admitted into advanced-manufacturing programs would have already demonstrated English conversational proficiency through an English language assessment. However, I believe that the initial relationship building would have been smoother and faster if I had spoken the same language as the participants' native language. In addition to the interviews being audio-recorded, I took interview notes and used reflective journals to document any nonverbal behaviors by participants during interviews. Excerpts from these notes are included in the individual participant summary section in chapter 4 of this dissertation.

Because of the complexity and nature of questions asked, the diverse cultural backgrounds of the participants, and information collected during the face-to-face interviews, I expected and was prepared to deal with possible ethical and sensitivity issues that may have come up. For example, during the interviews, some participants became emotional and teared up while talking about certain painful personal experiences during the migration and assimilation process in the United States. Families splitting apart, siblings assimilating at a different pace after settling in the United States, cultural conflicts with parents, etc. were all issues that came up and caused me to either change topics or immediately check with the participant to determine if he felt okay to continue or wanted to stop. Prior to the interviews, I learned about the counseling options available to participants at the college and was ready to provide contact information to counseling services to participants if needed. Throughout the interviews, I made sure to structure the interview style, including the questions, eye

contact, body language, and tone of my voice, so I did not come off as interrogating participants.

With the above awareness and measures taken, the face-to-face interviews allowed me to gain deep insights into the engagement experiences of the participants. The face-to-face interviews also allowed for immediate clarification as well as the ability to watch for participants' nonverbal cues such as facial expressions and any emotions. After each interview, I followed up with a couple of subjects with a phone call and e-mail to collect additional information and to cross-check answers and transcribed notes with participants. With the open-ended interview style, participants were able to describe their own experiences and provide rich data for the study. I found that using minimal broad data-gathering questions beginning with phrases such as "tell me more about," "when did you," "how did you," "what are your," etc. very helpful, as participants were always ready to talk. When participants were not opening up, not sure of the questions, or when I was not sure of their answers, I used probes such as "so what I hear you saying is," or "hmm, so what you are saying is" to clarify meanings of responses as well as to encourage in-depth descriptions.

Prior to beginning the data collection phase of the research, I completed a pilot test of the research questions and interview with two community college colleague administrators who were first-generation college and adult students in college themselves. Prior to the pilot test of the research questions and interview, I adapted most of the questions from my capstone project involving adult basic education students (High School Equivalency completion and ESL students) in an Integrated Basic Education and Skills Training program. The pilot exercises were very helpful in many ways during the actual research. For example, when participants got off track during the interviews, I felt very comfortable transitioning

into different areas of the interview protocol smoothly. Because I knew and felt comfortable with the interview protocol, I was also able to get back on track and ask questions off the interview protocol without having to go through the questions line by line. This created a calm conversational environment for the participants.

Interview protocol. One interview protocol was developed for this study: the student version. The interview protocol had me ask students about their personal and family backgrounds and about experiences with faculty, students, and staff members with whom they interacted on campus. The protocol consisted of three categories of questions (family background; educational background; and faculty, students, and staff experiences and perceptions). Each of these three categories comprised a number of questions. The family background category included questions about demographic information on gender, age, number of children in the family (if any) and ages, current family life and background, family life and background in their native country prior to migration, their migration story, and goals for migration. In the category of educational background, I asked questions about secondary education experience, level of education completed prior to migrating, educational levels of other family members, current educational goals and expectations, and highest level of education prior to enrolling in college. To learn about students' faculty, peer, and staff experiences and perceptions, I posed questions regarding the qualities and characteristics of the program; questions; suggestions; and/or advice to prospective ELL students, faculty, and administrators. Finally, participants were asked to share any information they would like to add that they felt was important and helpful to the study.

The first set of interviews was used to introduce the participants to the study, to begin the relationship-building process between participants and me, and to collect data for the

study. The second and last round of interviews, some face to face and others by phone, provided participants the opportunity to reflect on the previous interviews and a final wrap up. Additionally, my researcher field notes and classroom/lab observations provided a “dialectic stance” in collecting data for the research and helped in cross-checking and to “support a single conclusion . . . [and] gain information about different aspects of the phenomenon being studied (Maxwell, 2013, p. 104).

Nonparticipant Observation

The role of the observer in research is more in keeping with a positivist paradigm, wherein the researcher has little to no interaction with those being studied (Glesne, 1999). The purpose of the observation was to gain additional firsthand information regarding faculty, student, and peer interactions with students. Prior to visiting the class, I e-mailed and received consent (Appendix G) from the program chair, who also was the instructor for both the lab and class. The instructor sent me approval by e-mail before I left the site. Because of my late interviews, I joined the class and lab late. The faculty member announced the purpose of my visit to the class. He asked if any student(s) had concerns or objected to my presence in the class. There were no concerns expressed.

The observation allowed me to document the interactional dynamics that took place between students, their peers, and faculty (see the observation protocol in Appendix H). I was a nonparticipant observer during both the classroom and lab observations. The observations were done the same evening just after I conducted two face-to-face interviews with participants and lasted the entire class and until 10 minutes before the end of the lab period. I sat in the back row of the classroom but moved around the entire lab period. I took notes the entire time and immediately after the observations. Pictures were not taken during

the observations, and there were no audio or video recordings. I made sure that the majority of the observation notes were completed immediately after the observations, when the information was fresh. To protect the anonymity of research participants, I assigned fictitious names and changed descriptive characteristics such as course number, students, etc.

Class and Lab Observation Notes

The class, which was held in the evening and lasted for 3 hours total, was split between lecture and lab time. The classroom and lab space were physically connected so students and faculty could go between the classroom and lab without exiting the area. The class had 12 students that evening (all males who were ethnically diverse), a lab assistant, and the full-time professor. All 12 students were in the class prior to my arrival. The classroom environment was very quiet and seemed comfortable and engaging. In the classroom, each student sat next to a desktop station; was very engaged, attentive, and focused; and shouted out answers as the instructor worked the problems across the board. A few students slouched in their seats and spun in their chair during the lecture. During the class, students seemed to feel comfortable interrupting the lecture, and asking for clarification, and adding their thoughts to what was being covered in class.

The instructor seemed genuinely interested that students were learning the material and used a combination of instructional strategies in the classroom to engage the students. Some of these strategies included visual demonstrations including board illustrations, handouts, pictures, computer simulations, and actual completed products for demonstration. A few times, the instructor turned around, made eye contact with students, and checked to see if any of them had a question. The instructor always checked to make sure students understood the sections being covered before cleaning the board and moving on to the next

sections. Although some students voluntarily asked and answered questions, the instructor called on numerous students by their first names and asked questions of them. There appeared to be a good rapport between the instructor and students. Avelino, who I had interviewed a few minutes earlier, was very engaged, asked lots of questions, and contributed to the class discussion.

The instructor's office was within the lab and thus accessible through the classroom or lab entrances. Students, the professor, and the lab assistant were dressed in jeans, shirts, and toe-covering shoes. In the lab, students worked in pairs of three per machine, standing throughout the lab period, while going through their programming manual. They also took notes, and the instructor and lab assistant went around checking and demonstrating. Students used hand-eye coordination when working on rotating parts, buttons, and grinding machines. Visually, there were metal working magazines on tables, a sign showing that the program was an accredited National Institute of Metal Working Skills program and part of the Government, Education, Manufacturing, and Military industries coalition, emergency numbers, fire extinguishers, a security camera, an overhead big screen monitor, six lathe and mill machines, emergency eye wash and shower, and clean floors and environment. Other signs that were posted around the lab included those informing lab users about right-to-know safety materials and those warning them about hazardous and flammable, high voltage, and moving parts. Student had lockers where they stored personal items.

The interaction between students and faculty, and students and peers was higher in the lab compared to in the classroom discussion. In one interaction, Avelino, was working with two other peers on a machine but got stuck on getting the machine to work. The machine was similar to one he was using at work, so he stepped in to show his peers how to

set the measurements and add a liquid substance to the machine. He commented, while approaching the machine's control panel,

You know what? I use a machine like this at work every day. Let me show you something. Here is how you can set the measurement directly and get the machine to do what you want it to do. Sometimes you have to dump this in before the machine starts. For the measurements, you need to make sure you have the exact number plugged in to get it to work.

After dumping buckets of what seemed like a white liquid into the machine and pushing several buttons on the machine, the group got the machine to work. Avelino smiled and stepped back while pointing to the machine and to his peers as if to say "go ahead and check it out."

Reflective Journal

I kept a reflective journal and field notes. Some of the notes were written while moving around the lab, but the majority was written while I was in the student cafeteria just after the observation. In the journal and field notes, I described my feelings in connection with conducting the research. According to Morrow and Smith (2000), the use of a reflective journal adds rigor to qualitative inquiry. I used the journal to record my reactions, assumptions, expectations, and biases about the research process as well as what I was seeing, may be seeing, thought I should be seeing, and anything that came up and I wanted to capture. The field notes and journal became very helpful and provided additional data during the data analysis.

Data Analysis

In qualitative research, the accuracy of the information collected and interpretation may be validated through the use of multiple data collection strategies or by cross-checking researcher interpretations with participants (Creswell, 2014). The data analysis for this study was conducted in three stages. First, I started analyzing the data simultaneously with data collection. The data analysis occurred just as the initial interviews and observations began and continued throughout the study. This gave me the opportunity to adjust research interview questions as well as to member check with participants about any early themes that I may have been identifying. I was also able to adjust my predetermined themes and identify major themes and subthemes.

Second, using the information gathered through interviews and observations, I listened to interview notes and read through the interview transcripts, observation notes, and the reflective journal. During this listening and reading period, I took notes and identified tentative thoughts about categories and relationships and coded the data into themes and concepts using a categorical coding matrix (Maxwell, 2013, p. 107). The data matrices helped me examine the emergent trends that related to interactions and feelings (Miles & Huberman, 1994). I used the memos documented during the listening and reading stage to reflect on the research goals, theories, participants, and the experiences I brought to the study. After this “documenting” stage, the final stage of the data analysis included noting predetermined categories, adopting an interpretive phenomenological analysis model that included: (a) statements, (b) meanings, (c) meaning themes, and (d) a general description of the experience. The predetermined categories identified above evolved into a final table that

included the following headings: (a) themes, (b) actions, (c) meaning, (d) theory, and (e) recommendations. The categories are illustrated in more detail in chapter 4.

The coded data and identified themes were guided by the research questions and theories adopted to validate the information and interpretations. All redundancies were identified, and a peer cross-checked the initial coded themes. I submitted “cleaned up” transcripts and coded information to participants for a final member check.

Categorical Coding Matrix

Maxwell (2013) pointed out that there is no cookbook or single correct way for conducting qualitative analysis. Rather, in a qualitative analysis, any planned strategy can be modified when necessary in such a way to fit the research data, to answer the research questions, and to address any potential serious threats to the validity of the data (Maxwell, 2013). Coding in quantitative and qualitative research analysis differ in their form and setup. In a quantitative analysis, the researcher applies a pre-established set of categories to the data with explicit, unambiguous rules and aims to generate frequency counts of items in each category. On the other hand, qualitative coding is aimed at “fracturing” the data and rearranging them into categories to facilitate comparison among items in the same categories to develop broader themes and theoretical concepts (Maxwell, 2013).

The analysis of data can be a mysterious aspect of research for a novice researcher (Maxwell, 2013). In qualitative data analysis, the initial step involves reading interview transcripts, observational notes, and any documents that are to be analyzed (Emerson, Fretz, & Shaw, 1995, pp. 142–143). After each interview I listened to the interview and took additional notes. After removing myself from the classroom and lab, I went through my observation notes immediately and made additional comments about my thoughts during the

observation and other items I may have missed during the observations. This process helped me develop tentative ideas about the categories and relationships (Maxwell, 2013) between what I saw and heard; it also helped to facilitate my thoughts and insights in the early stages of the study. It allowed me to identify and flag “what is of interest in the text” (Seidman, 1998, p. 100) based on my expectations and to attempt to capture new insights during open coding (Corbin & Strauss, 2007, pp. 195–204).

Interpretive Phenomenological Analysis Model

An interpretive phenomenological analysis was adopted for this study because of the phenomenological approach used, the study’s goal to get closer to participants’ personal world and to take words from an insider’s perspective (Smith, 1996), as well as the epistemological position of the study (Smith, 2004). Drawn from hermeneutics (Palmer, 1969, as cited in Crotty, 1998) and phenomenological psychology (Giorgi, 1985), Smith (1996) proposed an approach to psychology that could capture the experiential and qualitative elements of research while maintaining a dialogue with more mainstream understanding of research in psychology. Key elements of interpretive phenomenological analysis include: (a) an inductive approach; (b) participants who are recruited because they are experts in the phenomena being studied and have their own experiences; (c) an analysis that includes what is distinct to as well as what is shared among participants; (d) an interpretive analysis; (e) being grounded in examples from the data; and (f) being plausible to the participants, readers, and general public.

Interpretive phenomenological analysis makes it easier for researchers with limited philosophical backgrounds to access phenomenological research (Willig, 2008) while still maintaining the philosophical traditions of phenomenological research. In adopting the

interpretive phenomenological analysis model, I was able to analyze the detailed examination of participants' life world as well as understand the meaning and intentionality (*verstehen*) participants applied to these experiences (Weber, 1949), which included personal, career, and educational experiences and perceptions.

Credibility and Trustworthiness

Due to the nature of phenomenological research studies, researcher bias can affect the data collection, interpretation, and analysis of the research. This is due mostly to the researchers' personal assumptions (Heppner, Wampold, & Kivlighan, 2008). Heidegger (1962) argued that an individual's *forestructures of understanding*, which is interpretation that occurs within one's involvements in everyday lifeworlds, influences one's approach to any text, often with presuppositions. Hans-Georg Gadamer (1960), in his book *Truth and Method*, pointed out that, although a researcher's prejudices are unavoidable preconditions for a researcher's interpretations, researchers shouldn't view the term prejudice as entirely pejorative. Rather, researchers should recognize the productive and unproductive prejudices that can contribute and enhance or limit their understanding of the text being studied.

Researchers using a phenomenological approach can guard against such bias and ensure trustworthiness by providing a researcher reflexivity statement and using triangulation, member checks, and peer debriefing (Morrow, 2005). A reflexivity statement shows the researcher's awareness that he or she is part of the social world being studied and cannot avoid either influencing or being influenced by it (Maxwell, 2013). The statement should point out the researcher's position or any background that could taint the research. The statement should also draw the reader's attention to how these researcher biases were controlled. For this study, I triangulated and member checked the data as well as used peer

debriefing, rich and thick interview descriptions, and a reflexivity statement to build trustworthiness.

To help validate the data collected, I triangulated the data, which came from multiple data sources. I conducted multiple interviews and interview follow ups and also made sure I took helpful researcher field notes and classroom/lab observation notes. I stayed at the site after each interview and observation to document all field notes before leaving for the night. Collecting data from multiple sources helped provide breadth and depth to the study, thereby ensuring that the findings were complete and thorough. Because of the nature of qualitative research, as the main research instrument, I depended heavily on available related literature and theory to guide the data collection and analysis. The dependence on related literature and theory served as a control mechanism for any of my personal subjective thoughts.

Throughout and after the interviews, I member checked participants' answers by confirming with each participant what I thought they had said. During the follow-up interviews with participants, I asked and confirmed with participants if my thoughts, analysis, and perception about their classroom and lab interactions were accurate. The comments I received from participants confirmed my thoughts and what I had written down about my lab and class observations. Because some words were inaudible from the playback and transcription of the audio recording, I went back to the participants to "clean up" the transcribed text and resubmitted the clean version to them for member checking. All the participants returned my e-mail with their approval to submit their comments as they had been cleaned up for the study results.

Listening and providing participants the opportunity to tell their story was the best part of this study. Their rich, thick text and my descriptions are included in later portions of

this dissertation. I attempted to find every opportunity to use the actual text from participants' comment to give readers general background information about the participants while concealing their identity. Each theme identified was also heavily supported by the actual texts collected from participants during the interviews, my observations, and follow-up comments.

Reflexivity and Positionality

My interest in this topic stemmed from two experiences: one personal and one professional. I migrated to the United States to join my family after completing my secondary education abroad. My path in higher education started at a local community college. Although I was a nonnative-English-speaking student, I never felt language (speaking, listening, and grammar) was an issue. Instead, I felt my lack of familiarity with the American educational customs affected my psychosocial connection, engagement, and perception on campus. My habitus and cultural capital (Bourdieu, 1977) was different compared to most of my native peers who had grown up in the United States.

I possessed the social and academic skills to be successful. However, my background and lack of familiarity with U.S. educational systems, campus culture, and practices (enrollment, financing, semester sequence, course selection and sequencing, grading, graduation requirements, faculty roles, student clubs, etc.) affected my social and academic experience on campus. I felt that my native peers had the cultural capital and thus easily transitioned and adjusted to campus and academic engagement. As I adjusted to the educational systems, I became very confident and comfortable, and I felt it a personal mission to work with the increasing and endless number of new students who may be in a similar position.

Professionally, for the past 12 years, I have been working closely as the lead advisor for students in advanced-manufacturing programs at a local community college. The majority of the students with whom I worked have included adult foreign-born students. In my current position as an associate director, I was working closely with the college's district-wide adult basic education, ESL, and advanced-manufacturing programs. The uniqueness of my role is that I was given the opportunity to be part of a team that designs and supervises programs that blend my three areas of interests (adult students, ESL, and advanced manufacturing). The increase in the number of adult ESL students, my own passion for this student group, coupled with the national shortage of skilled labor for advanced manufacturing is why I chose to use this research opportunity to explore and add to the limited literature about the engagement experiences of this group.

CHAPTER 4. FINDINGS

If it leads to compassion, you know it's knowledge. Otherwise, it's just more information.

Gerald Grow

The purpose of this phenomenological study was to explore and gain an in-depth understanding of the day-to-day lived engagement experiences of six adult ELL students enrolled in an advanced-manufacturing program at a midwestern community college. Specifically, this study collected the rich engagement stories and meaning participants assign to their stories and experiences. The essence of these experiences was solicited under the guidance of two research questions:

1. What are the perceived on-campus engagement experiences and social networks that support and promote success among adult ELL students in advanced manufacturing?
2. Are there perceived engagement experience issues and barriers for adult ELL students?

Two theories, Astin's (1984) student involvement theory and Knowles's (1980) adult learning theory, provided theoretical lenses for the study. A constructivist epistemological foundation, postmodernist perspective, and a qualitative phenomenology methodological approach guided the collection and analysis of the data. During one-on-one semistructured interviews, participants were asked to describe their interaction experiences with program faculty, peers, and staff and how they perceived these experiences. The data were analyzed using a categorical coding matrix and an interpretive phenomenological analysis model.

This chapter provides a summary of study participants; rich, thick textual descriptions; the categorical coding matrix; findings from the interpretive phenomenological

analysis of the data; and themes revealed after examining the engagement experiences of each participant.

Participant Summary

Six participants were involved in the study. All six participants were male, and their ages ranged from 25 to 55 years old. The gender imbalance among the study participants is clearly a limitation of this study. However, this is a reflection of the national trend showing females as being underrepresented in the advanced-manufacturing sector. This underrepresentation is likely drastic among immigrant families, in which females who are uneducated tend to begin their careers in the United States in the service sectors unlike their male counterparts. Although all participants migrated to the United States from different native countries, at different ages, and under different circumstances, all of them migrated to the United States from countries where English is not a primary language. Thus, from the participants' initial comments, language was a major common theme that emerged as a barrier to their interest in engaging on campus.

All the participants were working full time, were enrolled in college part time, and had been enrolled in the college between 3 and 5 years. All but one participant went through the college's ELL program before beginning classes in their major. Four of the six participants had migrated to the United States as immigrants with permanent residence status; two had entered the country as refugees. All of the participants' motivation and perception about engagement revolved around whether the engagement experience would be a benefit toward their overall goals: upward mobility for employment, getting ahead economically, and having a better future for themselves and their families.

Adult Learning Theory and Theme Construction

According to Knowles (1984), self-directed learning—a form of adult learning theory—adopts some of the key principles of andragogy. Self-directed learning encompasses the viewpoint that teaching methods and assignments for adult students should be designed with a goal to increase learner control of the learning process relative to that of instructors (Candy, 1991). On the contrary, other learning theories involve the viewpoint that directed learning can be situational and exhibited at different stages among college students at various ages as students come into contact with different learning environments (Grow, 1991). Transformational learning, as described by Jack Mezirow and Associates (2000), includes learning that involves the transformation of adult learners' core frames of reference in response to disorienting dilemmas. Such learning environments present situations where adult learners are forced to think critically, sometimes challenging a student's previous held ways of thinking.

Adult Students as Goal Specific

For adult student learners, like the participants for this study, the decision to enroll in college and pursue career training is most often due to economic forces. All of the participants in this study enrolled with a very specific set of goals: upward mobility for employment, getting ahead economically, and having a better future for themselves and their families. This set of goals influenced all of their decisions, including their engagement decisions on campus (Knowles et al., 2005) to complete training for employment. Although two of the six participants initially enrolled at the college to work on their English skills, at the time of the study, all six participants had one goal: career training and employment or advancement within their current organization. The urgency and need to focus on their goal was heightened by the participants' multiple life roles. Because they were employed full

time, had families, and were engaged in community events, they had limited time to engage in activities outside the classroom that seemed to be not directly tied to their goals.

All six participants made comments about how they carefully thought through selecting classes to be sure the class would help them attain their goals. For all six participants, the urgency to set and accomplish their goals was due to factors ranging from time commitment to family, age, income, and upcoming changes in personal life. When asked to comment about their time spent with others, including peers and faculty, outside of class, participants commented as follows.

Avelino. I need to get the training and finish early. I feel as [if] I am not young. I don't have much [of a] relationship with the other students. All homework is individual work. It's only you. Even for the lab, you can come in and work on the machine by yourself. I don't have time to stay here because I need to get done.

Rowan. I think for me, I'm a tool major; that's what I wanted for work. I took . . . Machine Shop 1, Machine Shop 2; took those two classes already with pretty much more hands-on. . . . Brick, mill, and grinding lathe are what I need. Now with the CNC, I only require two classes, but as I'm getting more into the class, I think I want to try to get my certification for the tool and die making. I want to keep on so as the CNC because I find it more interesting and plus I think [there's] more future [there], because everything nowadays is CNC, CNC. You still have your regular mill and regular lift, but pretty much everything's going towards the CNC.

Xanthe. I don't have time after school because I have got other things you know. I have to work and take care of my family, maybe send money to them. Some students in the class are young kids, maybe 18 years right? I think sometimes they

are just in school because of something like designing and building parts for cars, motorcycles, and other machines. The kids in the class talk about that a lot. For my age, and the older guys in the class, I am older. I don't have time for that, you know. I need to get training and use it for work. Everybody has their different reason [for being] in the class.

Theo. I always want to make sure the class is not a waste. I have taken one class every term, but I know they will help me graduate. And I have made sure I pass all of them, because if I fail . . . no, no, because then I will [have] waste[d] the money and spend another term taking the class again. So, to me, it's very important that every class I take I pass. Even if I am taking one class, I need to pass and show my job that I can do the work. For myself also, I feel I am getting the work done.

When asked to comment further on their engagement with program faculty, participants commented that they found that program faculty had clearly defined course objectives, expectations, and outcomes that were very helpful. They preferred faculty who could directly connect what they were learning to their career goals. For the participants, these courses were “not a waste” and counted toward their diploma.

Adult Students as Internally Motivated and Self-Directed

Although the participants had support systems, both in the community as well as among work colleagues and on campus, most of these adult learners believed that their individual will and motivation to succeed, their discipline, and their focus led to their success on campus. They believed that such attributes led them to enroll in college, attend class on time, complete assignments on time, make sure they were engaged meaningfully with faculty and peers who would enhance and support their goals, as well as know when and how to ask

for help when needed. Thus, participants believed that, although they were not as engaged outside of class as much as their traditional peers were, their internal motivation and self-direction were enough for them to persist and get them through the program. They believed that any failure was due to their own lack of effort and motivation and not because they were not involved in campus- and college-based activities. To follow up on participants' comments about their motivation to continue and complete the program in light of their unique engagement experiences, participants pointed out what motivated them:

Avelino. When I came to the United States, my knowledge of English was little because I worked with some English back in my home country. But here, like I said, I know I need to learn English because of work. Everything is in English. So I started with the ESL and try to learn new words every day. I try to learn every day because all my education is mandatory for me—it's mandatory to learn things, to learn English.

Xanthe. My workplace paid for the one welding class only. So then they thought that after I finished that class [that I was] a certified welder. I told them "No. I have to take 14 or 15 classes to get the certification." And they didn't want to pay for them, so I started by myself. I have like 3 years in . . . college. Sometimes I cannot take classes every semester and have to skip one semester because I pay for the fees and books myself. I don't have enough money to pay them. But I have to keep going because that is what I need to do for myself and my family. I try to take at least one class every semester. So this semester I am taking two. It's a little harder for the money, but I'm going. But in all the classes I have gotten A's.

And English is not even my first language, and all of these classes are in English. So I do my best. If I don't understand something, when I'm doing homework or something, it doesn't matter if I read three or four times the same chapter; I read it 'til I understand.

Last year I had two jobs. A full-time and part-time, and I worked like 85 hours a week. And I also was taking one class and I passed with an A. I didn't have much time to sleep, but it's worth it because I think that knowledge is the only thing no one can take away from you. You may have a house, but an earthquake could happen, and you'd have no house anymore. But if you have knowledge, wherever you go, it's with you.

Theo. It has been difficult to go to college. Yes, it has crossed my mind to stop college. But I look at it different[ly], not like other people. I can stop college now and just work. Maybe I will get more money if I just work. But I will keep going and finish. I know I will get a good job, better pay, and [a] better life for my family. I don't have to work like two and three jobs you see. Maybe one job will be good enough for me and my family.

Astrid. This is why I started school—so I can learn English. I am going to keep learning English. Because I know I need English in this country to do well in my job, for my family, and even to talk to people. English is important to me every day, everything. I have the classes I need. So I just sign up when the class is out. To me, I don't want to waste the time for another counselor. Maybe some kids can see the counselor, but I am okay. I use [the] computer and get information on the computer. And my girl she helps me also a lot. Everything is online.

Although they were not as involved in campus-based engagement activities as their traditional peers were, all six adult ELL students involved in this study had excellent grades and were very proud to point that out during the interviews. Kasworm and Blowers (1994) pointed out that academic performance of adult students is often at the same level or higher than that of their traditional peers. Motivation may be among the many reasons why adult ELL students show higher academic achievement compared to their traditional peers.

Although many stressed the value of having a faculty member who connected well with them through effective instructional and interaction methods, all of six participants believed that their motivation to succeed is what sustained and kept them engaged and focused in the program.

Adult Students as Bringing Life Experiences and Knowledge

Knowles (1984) pointed out that, because adult learners have lived longer compared to their younger traditional-age peers and have served multiple life roles (family, professional life, and previous academic experience), they attend college with a knowledge and experience base that needs to be considered and made relevant to the topic. Knowles (1984) argued that faculty should consider relating theories and concepts to students' lives by recognizing and acknowledging the value of experience in learning.

None of the six participants had enrolled in college right after high school and thus brought with them life experiences and knowledge that they felt contributed to their learning experiences both on and off campus. All the participants attempted to connect their current career and educational goals to where they came from and their life experiences. Although some of these life experiences outside campus were in contrast to their engagement experiences on campus, their comments indicated a preference for the campus community to

consider, connect, and apply these “nonacademic” experiences in student engagement programming. When engagement activities did not consider, connect with, or apply to their life experiences and knowledge, participants tended to view these activities as irrelevant.

Asked to elaborate on his comment about growing up as a son of a mechanic, Avelino, stated:

Well, in my country, I was a civil engineer. I was good in design. My father was a mechanic, and I always went to the company with him. He taught me what is the mill, what is the lathe, what is this tool used for, other tools for this. I think I have the ability because of my experience with my father and in my home country. I try to remember what my father taught me and try to apply it here. I like it that because of the experience I am able to help the kids and old guys in the lab and at work. I can also learn very quickly. I just need to learn English.

Other participants shared their perception about what they were learning in the program and how they connected that learning to their previous or current life experiences. For instance, Theo shared:

I like it that I am able to use my experience from working in the labs. I used to work with a company that builds slot machines for casinos. And some of the things I learned with that company, like the AutoCAD and tool machines, here are very similar. Plus, it's just the same field, using my hands and lots of machining work. I like it that the guys can come to me with questions in the lab. They know I have some experience, and I am always ready to help them with questions, especially in the lab. I don't say a lot in the class because of my English, but I am good with the lab because I can show them how to do things. I also [have] worked with lots of tool and die makers and asked a lot of questions.

I also see some of these young guys who I am not sure about their plans. To me, personally, when I first graduated from high school, I wasn't interested really in anything. [That was] a big mistake [on] my part. I graduated high school and said, "I'll take a year or two off and then I'll go back and I'll go to college." The two years went by, and . . . I started working and I started earning money and like, "I don't want to go back to school." I wasted 7 years of my life that I . . . not necessarily wasted, but now that I think about it, if I [went] school, right now I would have been done with my schooling and I would have . . . [had] my certification or whatever. So, knowing what I went through, I tell them, "Don't waste the time. If you want to do this, do it now. I have the experience. If you are not sure, maybe take some time off, because you don't want to just come here because your parents said choose something."

Adult Students as Relevance Oriented and Valuing Practical Projects

Knowles (1984) argued that adult learners are relevance oriented. In engaging with adult learners, it is important for colleges to consider setting up programs or projects that will give the adult learner good reasons for learning something new. Besides allowing students to choose projects that reflect their own interests, project options should be applicable to students' work or other responsibilities to be of value, and theories and concepts need to be related to a setting that is familiar to learners (Knowles, 1984). For Avelino, the decision to enroll and continue in the program was due to the connection between his work and school. When asked about his perception about the program faulty, classes, and labs, he pointed out:

For me, it is like real-world experience. It's not like this is some structure with theories. The professor is actually like he's got hands on. He's worked, and he's got a degree on it, so good. That's pretty good for me. Another thing, it's good for me.

For me that's work related. It's pretty much why I take the classes and project. I will need it in the future for my work. That's the best thing for me here with the CNC and everything. Because whatever happens, if tomorrow the company we work at closes . . . you work there so many years, you get paid because of the time you've been there. You get raises. If the factory or the place closes, then what happens? You go to another place and you're going to start at the bottom again. I talked to the tool and die makers. We worked with them. They fixed the dies, fixed the tools, and we ran the machines. I asked them, "You know, what do I have to do to get into where you guys are?" He said, "Well you've got to go to school." Since I got to learn both the hands on, and I got to learn the tool itself to work for the company, when you go to . . . the machine shop, when I started taking the classes, one of my supervisors, he knows and he knows the instructors. He told me right away, "Listen to both of them. They are really smart people." They were together at this company before.

When asked the same question, other participants commented:

This is partly the program and the ultimate for me is that later I will learn the mill. The mill machine is so much [more] interesting, because he will show us how it works, how any problem we see in our work can be fixed. He tries to give us one solution for the different problems we have there at our work. The other thing is . . . the class timing is good. Yeah, the evening is good because some of us we are working in the factory the second shift. It's really the possibility to come in after work. In the company [where] I work, there are many . . . jobs that I can stay and work overtime. So it's not easy to give time for other things. But when I come here, I feel good because the teacher here is teaching me something to use for work. I feel

good, and generally it's the teacher's case. [faculty name], he is the old one. . . .

Always [whenever] I needed anything, he immediately tried the solution there, and he brought a guy to help me take care of the problem. I don't have any problem here with the accommodation, the time to the study. We don't have problems.

Theo. In my PLC class I sit between two engineers. They say they graduated about 20 years ago, and they're just there to refresh because the technology just keeps growing and growing, so they got to keep up with that. I like the class because I am always asking them questions and learning from them. They have many years of experience working, so for me I see it as a good opportunity to learn from them, especially in the lab.

Astrid. When I need help from the professors, I know they are busy, but they have the experience and [are] very patient to help me. I have to wait for them to help me, because they are showing me something that I can use at work. That is why I am here: to learn how to use these machines for work. My CNC professor knows some of my managers at my work. So my manager knows that I am learning from [faculty name], who was also my manager's teacher. I can see that because a lot of the things my manager shows me at work, that is how he teaches us here. [He's] very patient and explains it well.

All of the adult ELL participants interviewed and observed placed a high value on engagement opportunities that supported their career training and connected their real-world experiences to their classroom and lab work. Participants viewed engagement activities that did not seem to directly benefit their educational and career goals as not relevance oriented. They valued and wanted to continue to build on what they already knew, and they valued

faculty, employer, and peer interactions that gave them the opportunity to work on practical projects. The expectation and experiences for this population surrounded engagement activities that recognized and required them to apply their practical skills as well as their life experiences and knowledge. The life experiences some participants brought into the classroom went as far back as their grandparents' occupations in their native country.

Adult Students as Valuing Being Respected

Knowles (1984) pointed out that the wealth of experiences that adult learners bring to the classroom should be acknowledged and that learners should be treated as equals in experience and knowledge. The participants in this study viewed respect as showing an understanding of them and their multiple life roles. The idea that faculty understood their commitments outside of class, compared to their peers who were enrolled full time in college and did not have as many commitments outside of class, was positive. Faculty who understood their unique situation would extend due dates for lab projects and homework for a reasonable length of time, permitted late attendance to class depending on work schedule, would come in early to help students with projects, and would assign projects that did not require students to come to the campus during their work time to work in groups. Such engagement activities and flexibility, whether with faculty, peers, or employers, were more valuable to these participants and led to academic achievement and persistence.

Rowan. [The professor] is okay. Sometimes he is flexible because he knows. . . .

That's another thing. Sometimes he tells us, "You guys, I know you've got to come in late because of your work. Just let me know. Call me ahead and say 'I'm going to be like half an hour and 30 minutes late.'" He's okay with that or sometimes too if

you are going to leave early. When you've got to take off and go to work. That's what I know. He respects and is very flexible with that.

Xanthe. I think maybe [the instructor] sees us older guys as serious.

Although I think the American kids are also serious. But the thing is, we are always answering the questions in the class. We are like the ones he [calls on to] answer the questions. The other kids are quiet and don't say a lot. If you ask me, I will say [it's] because we have more experience and the teacher he respects that.

Theo. Well, I don't see much difference in my class, but I can see sometimes.

I sometimes help with the lab. I can't read much, but I know something in the lab.

You see that maybe some of the guys in the class will come to my group and ask questions. Or sometimes we will show one person and then the professor will have me show the other guys in the class, because I know some of these things about the machines. I like the machines.

Astrid. Sometimes I have to be late to class because of overtime at work. My work need[s] me to work sometimes after [the] first shift. So I will let the professor know and he will say, "Okay, I understand." And when I miss a class, I can get the class notes and make up the lab. This is good for me and the guys who work. We have other things to do that maybe the other kids don't have. I mean, I am here to learn for . . . work, and so I don't miss the class to sit at home. I always have [a] good excuse and he always understands.

Although traditional college-age peers may have had similar career motivations, the participants' comments supported Knowles's (1984) argument that this population places a higher value on engagement and interaction experiences that support their specific

enrollment goals, respect and value their life experiences and knowledge they bring to the classroom and campus community, and provide opportunities for practical and relevant applications. Compared to their traditional peers, who may have had extra time and distinct social and psychological motivational reasons for their engagement decisions, adult ELL student were internally motivated and self-directed, and they believed that their individual motivations played a major role in their success on campus.

Motivation Theory

Throughout the literature review, data collection, and data analysis, several theories emerged that were considered to help in understanding how participants came to perceive their engagement experiences. Two such theories were the critical theory and motivational theory of Jorgen Habermas (1972), discussed later in this section. Habermas, an influential figure among critical theorists of adult learning, pointed out three human interests in developing knowledge: (a) technical interests, (b) practical interests, and (c) emancipatory interests. He explained that technical interests involve interests that guide humans to control their material environment and are developed to organize and maintain one's economic and political systems. For research participants, this interest could be tied to their goal to develop the necessary skills needed for employment or advancement in their careers. The second interest, practical interest, is what Habermas called *lifeworld*, and he explained that this interest is individuals' shared meanings in everyday human interaction among their communities. During interviews, participants shared their perceptions and stories of balancing an incongruent engagement lifestyle between off-campus life roles (including family, church, and work) and on-campus commitments (such as classes, homework, and on-campus activities). Emancipatory interest, the third interest type, is tied to one's desire to be

free from oppression. In interviews with participants, over half stressed that their supervisor or a family member encouraged them to pursue career training because of possible future opportunities in the organization. All participants also mentioned not being happy with their current status and feeling that their current financial compensation could be better, and thus, they were encouraged to pursue career training. Although there were many other theories considered, the participants' strong emphasis that their personal motivation played a major role in engagement and success drew my attention to the various motivational theories.

Whereas most motivation theorists argue that all learned responses involve motivation, Kleinginna and Kleinginna (1981) defined motivation as an internal state or condition, sometimes described as a need, desire, or want, that serves to activate or energize behavior and give it direction. Abraham Maslow (1954), among the most influential figures in the area of motivation, posited a hierarchy of human needs based on two groupings: deficiency needs and growth needs. He argued that, within deficiency needs, each lower need must be met before moving to the next higher level. Once each of these needs has been satisfied, or if at some future time the individual detects a deficiency, the individual will act to remove the deficiency. Franken (2006), on the other hand, argued that motivation is the arousal, direction, and persistence of behavior.

All the participants in this study had an intrinsic motivation to learn as well as to achieve academic and career success. Their comments revealed that their motivation was a result of an emotional connection to their individual or family self-esteem, optimism, religion and spirit, pride, and the goals they had set for themselves. The motivation for the majority of the study participants was cognitive, social, affective, conative, and sometimes spiritual. Like most immigrants, after migrating to the United States, all the participants made the personal decision to pursue career training. That decision was purely conative: to take

control of their lives, to meet set personal and family goals and personal dream, to achieve self-efficacy, and to reduce the control others may have on their life. Whether one's motivation is intrinsic, cognitive, spiritual, or ecological, there are various likely sources of motivational needs, as shown in Table 3.

Table 3

Likely Sources of Motivational Needs

Motivational Need	Source
Behavioral/ external	<ul style="list-style-type: none"> • Elicited by stimulus associated/connected to innately connected stimulus • Obtain desired, pleasant consequences (rewards) or escape/avoid undesired, unpleasant consequences
Social	<ul style="list-style-type: none"> • Imitate positive models • Acquire effective social competence skills • Be a part of a dyad, group, institution, or community
Biological	<ul style="list-style-type: none"> • Increase/decrease stimulation (arousal) • Activate senses (taste, touch, smell, etc. • Decrease hunger, thirst, discomfort, etc. • Maintain homeostasis, balance
Cognitive	<ul style="list-style-type: none"> • Maintain attention to something interesting or threatening • Develop meaning or understanding • Increase/decrease cognitive disequilibrium; uncertainty • Solve a problem or make a decision • Figure something out • Eliminate threat or risk
Affective	<ul style="list-style-type: none"> • Increase/decrease affective dissonance • Increase feeling good • Decrease feeling bad • Increase security of or decrease threats to self-esteem • Maintain levels of optimism and enthusiasm
Conative	<ul style="list-style-type: none"> • Meet individually developed/selected goal • Obtain personal dream • Develop or maintain self-efficacy • Take control of one's life • Eliminate threats to meeting goal, obtaining dream • Reduce others' control of one's life
Spiritual	<ul style="list-style-type: none"> • Understand purpose of one's life • Connect self to ultimate unknowns

Source: Huitt, 2011.

Because faculty play a major role in the engagement experiences of adult ELL students and students also commented on their motivation to succeed, the interaction between students and faculty is very critical for student success. Thus, faculty efficacy is a powerful input variable related to student achievement. Faculty efficacy impacts a teacher's motivation to engage students in the teaching/learning process (Proctor, as cited in Huitt, 2000). Huitt (2005) pointed out a variety of specific intrinsic and extrinsic faculty motivation actions that can impact student motivation, as shown in Table 4.

Table 4

Motivation Actions That Can Impact Student Motivation

Intrinsic Motivations	Extrinsic Motivations
<ul style="list-style-type: none"> • Explain or show why learning a particular content or skill is important • Allow students some opportunities to select learning goals and tasks • Create and/or maintain curiosity • Provide a variety of activities and sensory stimulations • Provide games and simulations • Set goals for learning • Relate learning to student needs • Help student develop plan of action 	<ul style="list-style-type: none"> • Provide clear expectations • Give corrective feedback • Provide valuable rewards for simple learning tasks • Make rewards available • Allow opportunities for students to observe more correct exemplars • Allow for opportunities to engage in social learning activities • Provide for scaffolding of corrective feedback

Source: Huitt, 2005.

Identified Themes

Matrices such as the data analysis matrix (Table 5) and the organization and theme formation (Table 6) assisted me in making meaning of the data as well as “identify[ing] patterns, comparisons, trends and paradoxes” (Maxwell, 2013, p. 173) during the entire research process. These matrices were “constructed to check the validity of the themes

Table 5.
A Data Analysis Matrix for the Perception of Adult ELL Students in Advanced Manufacturing about Their Engagement Experiences

Engagement experience	Avelino	Rowan	Xanthe	Theo	Astria	Kaiaffe
Students value faculty connecting to employer	Like real-world experience. It's not like this is some theories. He's got hands-on experience. He's worked and he's got a degree on it, so good. That's pretty good for me. For me that's work related.	Even when we go back to the workplace, our company allows us to use some time at work to ask help. There are people at work who can help us on the homework if we have a problem.	I like the fact that they are professionals before. And they know the companies well. I like the program.	I heard there are a lot of professors who have worked before they started to teach and some even interviewed employees for employers before. I would say they could kind of guide us how to interview with potential employers	We are going to visit one of the companies today and I already talk to the professor about working for that company. It's a good company. I heard they pay for the classes if you pass.	The professor for my program already worked for the company before. So anytime I have questions about the jobs I ask him.
Students value faculty flexibility and understanding	He's flexible because he knows. Sometimes he tells us, you guys, you've got to come in late because work. Just let me know.	Always when I needed anything, he immediately tried the solution there and he brought a guy.	The teachers are very nice. They understand if you need to come late, but you still get your work done. Sometimes I have to come early and work in the lab.	They're easy to talk to. They're open for students to ask for help. We get their phone number, their email.	Yes, I like it here because the professor is always checking to make sure we understand.	He explains that I should come early the next class. He will be there to help me first before the class.

Table 5 (continued)

Engagement experience	Avelino	Rowan	Xanthe	Theo	Astria	Kaiaffe
English language as a barrier to engagement	It is mandatory to learn English because the program to design is all in English.	Some guys in the program try to help but sometimes I cannot talk much but I get it. English is good, but difficult to learn very fast and I need time.	There are words you cannot translate. You need to understand what you are talking about or what you're reading to know what that means.	When I relate with my friends and cousins, it's in Spanish. Sometimes when I come, I try to ask a question, a Spanish word just comes out and I can't help myself and have to stop.	When I come to school, I just have to pay attention to the words. Write them down and go home to check. Because I can't ask the people in class. Maybe they think I don't know or something.	To do anything, I need English. In my home country, I learned some English so writing is not a problem. I struggle to listen and speak here a little. Speaking is a problem because of the accent but not writing.
Online technology engagement	I am not the kind of person to be online but I mostly use texting and other apps like Whatsup Tuento to chat with friends you know. None of them are here in the school.	YouTube is always good for me to find more information. The video is great for me. Then can show someone on the computer if they can help explain this for me in my language.	She would not understand me if we met face to face and my English was not good. Now my English is broken. It was not good."	Even for guys in the classroom, I have to sometimes chat with them online because they leave to go home after class; sometimes I think we struggle to have the conversation in the classroom because we don't understand.	[My spouse] help me a lot online because she can't go to the school. That is better because when I text and they reply, I have all the information I need.	So I am chatting online, reading about the school work and my country and watching YouTube videos about the lab and machine, welding or anything.

Table 5 (continued)

Engagement experience	Avelino	Rowan	Xanthe	Theo	Astria	Kaiaffe
Multiple life roles	For me and the guys who work, we don't have much time. We come to work on the first shift, then I go home, change quickly and come here to class. When I go home, I sleep so I can rest for work again or help out in the house.	The problem is I don't have the time. I work full time and sometimes I work overtime. If I have time, I will work overtime. I also need to go home and watch the kids, groceries, kids' homework, or something like that.	I can't stay past class period. Too much going on for me with work and family. Yes, I help out a lot with my family, and sometimes my dad volunteers me to help other people's yard, snow work, etc.	I work a lot of hours. Usually I stay at home for 30 minutes between two job and school work.	My parents are sick. They need support. So immediately after class I go home to see my parents and also help my wife to get a break. And I did not want to go out and speak unless the program teacher is informed and approved.	I will like to be involved.

which emerge” (Maxwell, 2013, p. 173). Miles and Huberman (1994) argued that researchers should create a diagram after the data collection that reflects some risks so the researcher is forced to begin to theorize about the social phenomenon under study. Miles and Huberman (1994, p. 11) described such a data display as “an organized assembly of information that permits conclusion drawing and action taking” and making the analogy that “you are what you eat,” they claim that “you know what you display” (p. 11)

The categorical coding matrix used in identifying, analyzing, and finalizing themes emerged from participants’ interview comments is illustrated in Table 5. Overall, the four themes that emerged out of participants’ comments and my observation notes were the following: (a) faculty–employer partnerships and understanding, (b) language barrier, (c) participants’ use of online technology as a tool for engagement, and (d) participants’ multiple life roles. As shown in Table 5, each participant shared multiple comments that supported each of the themes identified above. In some cases, depending on the participant’s unique situation (age, time spent in the United States, time in the program, perception of engagement opportunities, etc.), the comments were very specific whereas other comments inferred a connection to the theme.

The construction of Table 6 eventually led to a thematic data display that helped me understand and present the major concepts that evolved through my inquiry into the engagement experiences and perceptions of adult ELL students in advanced manufacturing. Based on the categorical coding matrix and analysis of the data using an interpretivist approach, three themes emerged from the study to help answer the research questions. In line with the thinking of Immanuel Kant, the German idealist, and Husserl (1960), the interpretive tradition includes that “reality” exists in human consciousness itself and not in a

Table 6.

Organization and Theme Formation During the Data Coding Stages

Theme	Actions (what)	Meaning (who/how)	Theory (connected)
<p>Research Question 1</p> <p>What are the perceived on-campus engagement experiences and social networks that support and promote success among adult ELL students in advanced manufacturing?</p>			
Faculty-employer partnerships and faculty understanding	<ul style="list-style-type: none"> • Flexibility • Work on assignments at work • Network with senior staff and peers • Respect from colleagues at work and school peers 	<ul style="list-style-type: none"> • Hands on • Flexibility • Understands 	<ul style="list-style-type: none"> • Respect • Life experiences and knowledge • Practical
Online technology	<ul style="list-style-type: none"> • Use of college website • Text message peers 	<ul style="list-style-type: none"> • Saves time • Easier to communicate • Easier to save documents • Flexibility • Embarrassment 	<ul style="list-style-type: none"> • Relevance • Practical • Internally motivated and self-directed
<p>Research question 2</p> <p>Are there perceived engagement experience issues and barriers for adult ELL students?</p>			
Language	<ul style="list-style-type: none"> • English only spoken at school • Limits communication • Takes time to engage with staff and peers 	<ul style="list-style-type: none"> • Challenge to communicate 	<ul style="list-style-type: none"> • Practical • Life experiences and knowledge • Respect
Multiple life roles	<ul style="list-style-type: none"> • Age • Family • Employed full time • Community involvement 	<ul style="list-style-type: none"> • Limited time 	<ul style="list-style-type: none"> • Goal oriented • Life experiences and knowledge • Respect

tangible identifiable object outside the world. Any experience of reality is possible only through interpretation (Prasad, 2005). Participants' own social interpretations and the meaning they assign to the engagement experiences, according to phenomenological interpretivist thought, is what matters. The four themes that emerged from this study's data—multiple life roles, language, faculty–employer partnerships, and online technology—including minor emerging themes, were reflected in the participant transcript observation notes and reflection journals collected during the study. The organization and theme formation during the data coding stages that resulted from the interpretive phenomenological analysis is illustrated in Table 6. These themes are discussed in detail next.

Multiple Life Roles and Engagement

Compared to their peer traditional students who are younger, single, often enrolled in college full time and working part time, adult students often have to balance other competing life roles while enrolled in college. Adult students often have many nonacademic demands, including paid work responsibilities and time spent commuting to work (Kasworm, 1990). They do not have the flexibility to physically separate themselves from their complex past worlds (Kasworm, 2008) after enrolling in college and thus are unable to be “intensively involve[d] due to work and family obligations, to the financial demands of full-time enrollment, to enrollment in distance education, or to participate in evening/weekend/accelerated degree programs” (Kasworm, 2014, p. 69). For the participants in this study, these roles, including full-time work, parenting, spousal responsibilities, caregiving, as well as community involvement were all evident in their responses and comments about engagement experiences. All six participants pointed out that, unfortunately, their nonacademic life roles and commitments outside of academic work took time away from

their academic interests and involvement in campus-based engagement events. However, these roles and those with whom they interacted served as social support networks along with providing work and life experiences that their younger peers lacked. Kasworm (2014) pointed out that, compared to their younger and traditional peers, adult or nontraditional students had a different collegiate involvement and participation experience.

When asked to share their perceptions and level of engagement with the campus community, all six participants stressed their busy lifestyles. Specifically, they stressed the need to work full time and support family, even those who were single but lived with parents and supported extended family in their native country. All six participants, indeed, identified themselves as workers before college students. From their comments (below), the order of their priorities was family, work, and then school. Although some participants were aware of campus-based engagement opportunities, such as clubs, tutoring, career fairs, and intramural leagues, they commented that their commitments outside of school did not allow them to engage in such college-sponsored activities. They spent limited time on campus and did not interact much, psychologically, outside the classroom. When asked to share their interaction experiences with faculty and peers on campus, Xanthe commented:

I don't interact much with the professors after the class time mainly because most of the professors have another job. There's one [who] is here in the mornings from high school and in the evenings for college. And I'm busy too, because I work a full-time job. So I have just a few times extra time to do just stuff I need like shopping, grocery shopping, laundry and stuff. I didn't have much time to sleep.

I try to make friends with the students in my classes. Yeah, I always try to make jokes in Spanish. Some of them know a little bit and catch some stuff, and sometimes they translate for them. And there [are] more Hispanic guys in the class.

I think I do [interact], although there are younger students in my class. There are some [who are] 18–20; I am 26. And some guys they just come to school; they don't have to work. They don't have that situation where they have to earn the money they will use to pay the class. But I think we blend [well]. Most of us, we do good.

I don't see or do any school projects with them anytime outside the classroom because, as I told you, I'm pretty busy most of the time with work. On the evenings when I don't come to school, if I have homework, I am doing homework. It usually takes me a long time because I'm not really a good reader. I like to read, but if it is about welding. I don't read books like novels or that stuff.

Avelino. There are . . . many jobs there in the company. It's not easy to give time for other things. Sometimes, I need to do overtime at work, and so it is difficult to find time. It is difficult to establish [a] relationship with the other students. The other thing is that the homework is for you to do . . . and not with the other classmates. It's only you. When you come into class, you go to the lab and do your work. The one relationship is only when we have to do lab especially. The class is minimal for relationships. It's individual, the test, and the class is mostly individual.

Astrid. Sometimes I have to be late to class because of overtime at work. My work need[s] me to work sometime after first shift. How can I do something here after class because I am tired? . . . I cannot stay here to do anything because I have to

leave after school. I drive 25 minutes to my house after school, and sometimes I have to go home and get my children because my wife works overnight. If I am not in school, I am at work, taking care of the kids, groceries, or something. The time I get is for sleeping, maybe laundry, grocery, or something. I come here for the class and lab and go home.

I know the other guys are also busy. All of them work. Maybe one or two kids in the class, but all of us work. We are tired when we leave school. We don't have any homework for the group so everything is individual. If I have a question or problem with the class, I wait for the next day and talk to somebody. I don't want to bother anybody because sometimes I even cannot explain what question I am asking to the person. So I just wait and talk to the professor face to face.

I meet new students every class because I am going part time and every class has new students. It's okay because I meet a lot of people. Some of them I work with, some from my country, and some American kids.

Theo. I don't think I have the time. I work full time. I just come during night time. I cannot be involved in a club now because of work. I [would] like to join a club if there is one in engineering . . . because I would learn more about what I'm actually studying. Another one would be a low speaking English club, where I could get help with speaking better English. I don't even know if that club even exists.

During night time, I really don't have friends, or I don't know people who [are] doing the same thing I do. During night time, you even have students who [have] already graduate[d] and they're just here to refresh. They're not going to have a long friendship with someone who is barely starting. In my PLC class, I sit between

two engineers. They say they graduated about 20 years ago and they're just there to refresh because the technology just keeps growing and growing so they got to keep up with that. They are very busy like everyone else and are here not long [enough] to be friends with.

It's very poor to be honest with you. Some of the classes overlap with other careers. For example, the class that I'm taking Tuesday, it's Manufacturing Principles, and I'm going for mechanical engineering, and most of them are just going for CNC. They form groups with people [who] are going for the same path, not me. I think I'm the only one who's doing mechanical engineering in that class. So, it is difficult to even be in [a] group that will fit my career goal.

With the American guys, I try to make friends when we have to do practice or projects in class, and I'm doing well but see they are having some issues. I try to tell them how I'm doing, maybe study with them too. So I'm always trying to make friends.

But basically, yeah, I just come to class, and learn everything I can. If I don't understand something, I ask them, but I don't talk to them about personal stuff. Usually I don't talk to the counselor or students about that. Just about welding. I have a Hispanic friend here. I talk to him about more stuff, like personal stuff. But . . . I don't know how they call it but I'm too jealous with my stuff; I don't like to share my stuff. To start sharing my personal stuff with someone I have to trust him, first of all. And it takes time for me to do that. I'm not going to meet someone and start telling them my personal problems or anything like that outside of the class.

It's always different students. Maybe, four or three have taken the same class before with me, but every time it changes. I don't get comfortable with them in just one semester. We try to make friends, but sometimes there's not enough time.

Sometimes we are together just one semester and we won't see each other again.

A report from NCES indicated that 56% of students 24 years of age or older identified themselves as workers first and students second (Wirt et al., 2003). Those in this group also were more likely to be married and less likely to complete a degree within 6 years. The same report showed that, although 26% identified themselves as students who worked, 18% indicated they did not work. Compton et al. (2006) pointed out that adult learners often identify themselves as employees first before considering themselves as students.

Participants reported being affected in many ways by their commitment to nonacademic life roles, including not being able to enroll in full-time academic coursework and graduate on time, which was their goal. For participants, being a part-time student resulted in getting off track from the traditional sequencing of program classes, taking a longer time to get their diploma, not having particular cohort peers with whom to go through the program, and dealing with possible program and faculty changes.

Participants also indicated that, due to their nonacademic off-campus commitments, they struggled to stay on campus after school to work on projects with faculty and peers. Instead of coming to campus or meeting with faculty, participants relied on online platforms such as YouTube to review material taught in class. Besides benefitting from the self-pacing of online videos, participants also benefitted from the flexibility to watch the videos at any time and translate the audio into their native language. Others simply worked with their employer to provide time during work hours to work on projects and assignments. The

opportunity to work on class assignments at work with experienced colleagues was a major value to students. Because of this opportunity, participants expressed the value of the employer–college partnership and apprenticeship programs. Specifically, although participants reported a favorable relationship between faculty and themselves, they perceived the intentional engagement relationships between their faculty and employer as more supportive of their educational and training goals in the program. The students who had employers connected to the program by far had a more positive perception of and expressed more confidence in completing the program and moving into a higher paying position within their company. The next section includes comments by participants when they were asked about their overall interaction experiences with the community, including faculty, peer students, and student services.

Faculty–Employer Partnerships and Understanding

Faculty interaction with the companies at which students worked meant a lot more to the participants than did their own actual interaction with faculty. This faculty interaction with the company or supervisor translated into flexibility with schedules between work and school, the opportunity to use work time for homework, tuition payment through apprenticeships, the ability to apply the skills learned at school for work and vice versa, job security, future opportunities for upward mobility at work, networking, and consulting with older employees at work.

There was no time for these students to meet outside of class and lab because both students and faculty had commitments outside their class time. Students had family and job commitments, whereas program faculty had adjunct appointments and thus were not

available except during class time. This was not a problem at all for students, because as Xanthe put it,

I [would] not be available anyway. I have to be out of here right after school, so I cannot meet with the professors even if they are here in the day time. I work every day from 9 to 3 o'clock.

Also, because students were enrolled part time and many of the faculty members had adjunct appointments, students never got a chance to take multiple classes with the same instructor, although they wished they had some of the same faculty in other classes.

When students were on campus and in class, they favored faculty who listened, helped, and understood their unique situations. Faculty fitting these criteria included those who worked with students on resumes and interviews, who stayed late to help students in the lab, and who made their contact information available to students. The quotes below reflect comments made by participants when they were asked to describe their engagement experiences with and perceptions of faculty. All six participants expressed having positive experiences with faculty. However, these experiences were more meaningful because the faculty had meaningful partnerships or relationships with the participants' employer.

Avelino. I like the real-world experience. It's not like this is some structure with theories. . . . Actually, like, he's got hands-on. He's worked and he's got a degree on it, so good.

Another thing that is good for me is that it's work related. It's pretty much why I take the classes and the project because I will need it in the future for my work.

He's flexible because he knows my situation or our situation . . . those of us guys that work full time. . . . Sometimes he tells us, "You guys, you've got to come in

late because of work. I understand. Just let me know. Call me ahead and say, 'I'm going to be like half an hour and 30 minutes late.'" He's okay with that, or sometimes to if you're going to go home early because of work, "You've got to let me know." That's what I know. He's flexible with that.

That's the best thing for here with the [computer numerical control programming] and everything because, whatever happens, if tomorrow the company we work at closes and you're making so much money per hour . . . you work there so many years, you get paid the same if you go somewhere else because of the time you've been there and school. You get raises. If the factory or the place closes, then what happens? You go to another place and you're going to start at the bottom again if you don't have training.

Yeah, I'm trying to save money. That's why when I first heard the company paid for the classes. . . . I didn't know the work paid for the classes because that's how I got more interested. . . . I came, I came back and . . . I'm just thinking to myself, I don't want to stay here because I see operators that have been . . . where I was working, they've been working for 10 plus years. . . . They are just waiting for their next raise so they could get and make a little bit more. I'm like, "I don't want that."

I talked to the tool and die makers. We worked with them. They fixed the dies, fixed the tools, and we ran the machines. I asked them, "You know, what do I have to do to get into where you guys are?" He said, "Well you've got to go to school." I talked to the supervisor, and he told me, "Oh, you need these classes." He printed out a paper with the classes that I needed. I signed up. He told me, "If you're

interested, go talk to HR. I think that the company pays for your classes if you pass them.”

There’s actually . . . the stamping side. We also have the shop side they call it. Then the tool and die shop, molding shop, and then there’s the machine shop where you get the mills. I was like, since I got to learn both the hands on and I got to learn the tool itself to work for the company, why not go to school?

At the machine shop, when I started taking the classes, one of my managers at work at the machine shop, he knows the two professors. He told me right away, “Listen to both of them. They are really smart people.” They were together at the same company before the professors came to teach. Right now, that’s another connection right there. . . . Personally, that’s why I choose to go to college, and I like the professors because they help us.

The two years went by after high school and I started working and I started earning money and said like, “I don’t want to go back to school.” But I also feel like I wasted 7 years of my life . . . not necessarily wasted, but now that I think about it, if I [had gone to college] right [away], I would have been done with my schooling and I would have been making money . . . have my certification or whatever.

Math class is required for my certification, but it’s not like the other classes because the math . . . teacher goes in and he works with you from the book. He doesn’t actually talk to you like I have experienced with the three shop instructors. They actually worked with you. If you were struggling with something, they will work with you. They are going to try to help you out step by step, which is I don’t

know [like] any other classes. . . . It's more like you're more hands on. You work with things, structures together, instead of him just giving you the lesson like math.

Rowan. The good part of the program is the teacher, and the ultimate plan for me is to get training for my work. The teacher for mill is so . . . interesting because he show[s] us how the machine works, how any problem we see in our work can be fixed. . . . The professor [tried] to give us one or two solutions for the different problems we have there. The other thing is . . . the timing for the class is good. It is in the evening and work[s] with my job.

The evening work[s] because all the class[es] fit for us and work. We all work in the factory, the first shift. It's really the possibility to come in after work. For this reason, we have to work first or third shift. Any other time will be difficult. Like today or some days when we have to come to school, we don't have overtime; we can't join the overtime for this principal reason.

I don't have other times to meet or stay on campus . . . not only for this, but in the company, there are many . . . jobs that are needed. It's not easy to give time for other things. If I have time, I will work. I need the money.

Here I feel good because the teacher here and the counselor are very helpful.

It's like I feel good and generally [it is because of] the counselor and the teacher. Always when I needed [anything], they immediately tried . . . solutions to help me. I don't have any problem here with the accommodation; the times to study and work is okay for me. We don't have problems. Even when we go back to . . . work, our company . . . allow[s] us to use some time at work to ask [for] help.

Sometimes we don't understand something from class and need to ask [a] manager; they are always helpful.

Xanthe. No, I don't really spend much time with the teachers outside of the class. They have other jobs, and I also work full time, like 85 hours a week. So we don't have time to meet outside of class time. Like one teacher I have in my class this semester, he works as a teacher at the high school during the day and teaches at night here.

I like the fact that they are professionals before and know the companies well. I like the program.

The teachers are very nice. They understand if you need to come late, but you still get your work done. Sometimes I have to come early and work in the lab—very nice. I am moving to another place but will drive 45 miles here to take the classes because I like the teachers here. All the homework is good because you do it by yourself and the teachers they know that because we all work. In the lab, we work together like you [saw] yesterday. But homework—every guy will do their own homework so we don't need to find time to meet.

Theo. Well, I have had different [professors]. It varies. Every professor has his own personality. Some of them are friendlier than others. I really don't have anything to say; they're being very helpful, especially at the beginning when I started. The ELI teachers they helped me a lot. Some manufacturing teachers—I had not taken a lot of manufacturing classes—but most of them have been very helpful. But I will say I feel okay talking to them and asking for help because they always tell us to ask questions.

Yes, there [were] a couple [of instructors] who I wished I could have a class with . . . again. But I had never had a professor two times here; it was only one time. That is something that maybe [would] help me because every time I get a new professor. I think because I am going part time . . . I always miss the second semester with the same professor.

I have taken classes with professors that I have never seen again, and it's been almost two years. It looks like professors are just dedicated for one class, and they don't teach anything else or maybe like I said I just miss them because I am part time.

[Faculty are] easy to talk to. They're open for students to ask for help. We get their phone number, their e-mail. With some of them, I could even obtain an appointment just to work with them one on one. To me, that is very helpful because sometimes that is what I need . . . the one-on-one help to explain something.

I used to work with a company that builds the machines. They sell them to casinos. Now the company moved to another state. I worked with engineers in that company. One of them told me to think about starting school. He pushed me to come back to school. That was about three years ago, and that's how I ended up going to college right here.

Yes, [the supervisor] told me that I would never get any opportunity here in this country without education. I think he's right. That's the reason why I'm here.

The engineer that I just mentioned, he was an immigrant, too, and he came to this school for the same program. I used to ask him a lot of questions for homework, but he left when the company moved to Las Vegas, so he got a better opportunity down there. I really don't have any connection with someone who is in the college

and at work right now. . . . I heard there's a lot of professors here who have worked before they started to teach. I would say they could kind of guide you where to go or how to interview with potential employers. I heard some of them; they've even interviewed new employees for employers before, so it would be a good thing. . . . They could be someone who you can refer whenever you had a new interview. In my opinion, yeah, they would be helpful. That would be great.

The job that I used to be at wanted to pay for me to attend college . . . but they mentioned that I had to sign a contract. If they . . . pay for my tuition I would have to work for them, I do not remember, a certain amount of time, and another thing, they would offer money, but I would have to be an "A" student. That is pretty much impossible if you're full time, and even I used to work overtime. It was hard, so that's why I never took it. To be honest with you, I'm not that intelligent to get [an] A every time.

Astria. When I started, that was my scare. I was not sure the teacher [would] like me. Maybe because of my accent they [would] say . . . "you are dumb" or something. But they are always nice. Maybe because they know where I work and that I know the work. Sometime I show my classmates the work. . . . I like how the professors explain to the class. They make it very simple for me to understand, and if I don't understand I can always see them for help. They show you how to use the machines.

At the beginning, I could not catch up with the tongue . . . of the instructor. . . . After a few days, I told the instructor about the problem that I [was] facing. Thus, he started presenting everything [on] the whiteboard. Writing on the whiteboard

help[ed] a lot. Then I got it. Then, any time after that, again, whenever I faced difficulties, I asked . . . questions and definitely the professor [would] stop to answer. He is good.

Overall, the instructors are . . . better for me every time [in] . . . class also. Every instructor, not the math instructor only, every instructor right after when class gets over, they [would] be available to help me. Sometimes in general when they explain, I may not understand something. Thus, right after class all the student[s] will go and thus I will sit with the instructor and I'll ask everything I have a question about. When I am facing difficulties, definitely at that time he will help me.

Yes, they are helping me. At the beginning [and] now also, yeah, they [tell] me every time: "If you face any difficult, just raise the question; we'll have you at the off time also, outside the class also"; that is what they are telling me. Thus, because of their good support, I am [very] motivated; they are giving me the full support.

Maybe in my country, [all the] time we usually used to respect the senior one. We used to respect. In here I see equal. Teacher and student are not equal in my country. Here, both are equal, and I like that.

The students call the teacher by their name, and we don't have the habit of calling teachers by their name in my country. That makes me feel very relaxed and not [tense], but at first I was confused about going to them because I did not want to call them by their names. I like the classes here and the teachers; they have experience. That is what I want: to learn from their experience and get a job with the certificate.

I was not sure if I will like this job, but now I am sure that this is good for me. I already found some companies who pay \$14 per hour with my certificate and will start applying. We are going to visit one of the companies today, and I already talk[ed] to the professor about working for that company. It's a good company. I heard they pay for the classes if you pass.

I like it here because the professor is always checking to make sure we understand. Everyone likes it, especially people like me from other countries. Very small class, and the professor teaches us very practical things . . . hands on and how to use machines. We don't have time to come here every day, and we need to get good jobs.

Kaiaffe. I did this work back home, and so I see that the professors . . . are good. Before the class, I talked to my friend and he said, "You will be fine, just go." I did not want to fail the class. I hear[d] many people say they start college and they stop. So, I just need to talk to the professor the first time. This still happens every class. I am a good student, good grades, but always not sure because I think one day maybe the professor will think I am not smart. But so far, no problems at all. After the first couple of weeks maybe, the professor noticed that I was good. I always ask questions, even when I know, because I want to show the professor I was listening and following. Ahh, it is easy, but my speaking, very difficult sometimes you know.

The professor for my program already worked for the company before. So anytime I have questions about the jobs, I ask him. Or sometimes he takes us to see the company. That is good because I want to find a company to work [at] after I finish the program.

I just have a few classes—different professor each time, but that is okay. I try to know the professors and then meet them before or after the class start[s]. That way, I can prepare myself for the class. I have not drop[ped] any class now.

One day I was late and did not come to school. I called the professor, and he called back. I think that is very nice because I know he is busy; he call[ed] me back. That is nice. He explains that I should come early the next class. He will be there to help me first before the class.

Language

I could have used my phone or dictionary to translate some things, but the thing is, you cannot translate everything. There are words you cannot translate. You need to understand what you are talking about or what you're reading to know what that means. You can be a great worker, but if you cannot communicate, you cannot get a good job, a good position, or good pay. (Xanthe, study participant)

Throughout the interviews, one of the many themes that emerged initially based on participants' comments and my observations was the issue of language. All of the participants, in sharing their engagement experiences, pointed out that their ability to successfully engage with the campus community, including faculty, peer students, and staff, depended on their ability to communicate. Therefore, the ability to speak, understand, and be understood in English was very important. Socially, all participants felt more connected and engaged with their local communities and work site because the majority of their fellow community members and employees spoke their respective native languages. It is when they got on campus that their English language became an issue for participants. Although language did not necessarily hinder their interaction with peers, faculty, and staff in the

program and on campus, participants commented that they felt their engagement experiences would be better and would support and enhance their academic and career training goals if they spoke English well.

Although participants found student services and other staff on campus very helpful, they also believed that having a native speaker or a staff member who could easily communicate and explain things when working with student services would expedite their understanding and completion of required paperwork (such as financial aid and registration), advising, and career counseling. Participants believed they got by with their limited English at the conversational level in class and with peers. Comments made by participants when asked about their overall interaction experiences with the community, including student services are provided next.

Avelino. To me, speaking English is not a problem at all. Like I said, I graduated from high school and did well socially, maybe not well in English and reading. I don't like writing and don't like reading. I think that is why we did not like school, because we [felt] very good about math and I liked my shop classes, but I feel like the high school focused too much on the writing and reading. I understand why I need to learn . . . English every day; because all my education is in English, it is important to learn the words, to learn English, because when people are talking and you cannot say something, it's very difficult. You would say, "What"? But I think I am okay now.

Some guys in the program, they don't understand and cannot speak well so I have to help translate for them. To me, I am okay. Yes, some guys struggle to speak. Like me, that is all we speak when we go home . . . our language. We speak English only at school or maybe when we work.

Rowan. I feel I don't have language control because I am in a different country. I only have a little time in the United States. When I came [to the] United States, I knew a little bit English because of my work in my country. It is mandatory to learn English because the program we use in my country to design for work is all in English. I was in civil engineering.

In the mechanical field, all the instructions are in English or French. Here any words right now, other than my language, I don't know. I began the ESL program and I tried to learn English every day to learn new words. I try to remember what my father [taught] me, [and] I try to apply here. It has been difficult for me, for my language, because I need to learn everything in English, which is mandatory.

I try to learn every day because all my education is mandatory for me; [it] is mandatory to learn things, to learn English. Because when they [say], "How [do] you work with this machine or that," it is English [at] this moment, especially when I am [having] training and have . . . growth for my work. All the people at work teach me, especially in . . . English . . . the other things . . . the mechanic[s], I tried to learn.

With my [children at home], it's the same. When they are all talking in Spanish, I tell them, "Hey, don't talk to me in Spanish. Only talk in English because, today, it's mostly English." We are talking more in English, and they say, "No, no, no, no. Don't speak in Spanish, speak in English." Then I say, "Hey, boys, what happened?" "No, no, no, no, no. English, no, no, no, no." I have one boy saying, "No, no, no, no, no, pappy. No, no, no, no, no. English only, English only."

Xanthe. I struggle with the language; every day I have to correct myself when I am here in school. I like it here, but sometimes when I am ready to speak, I will

start to speak my language then I will say . . . “Uh uh, no, I need to speak English.” Even my co-workers; it is difficult to speak to them. I think my English is getting better because I come to school. I even tried to get my coworkers—all of them don’t speak good English. I tell them to take welding classes or especially learn English, because some of them don’t know that much English. You can be a great worker, but if you cannot communicate, you cannot get a good job, a good position, or good pay.

The guys in the class they try to help, but sometimes I cannot talk much. But I get it. . . . English is good but difficult to learn very fast, and I need time. But I don’t have time to learn because I need the training. . . . English is sometimes the problem. When people teach me something in . . . English, especially in . . . mechanic[s], I understand. I have to ask. At work, I don’t need the English for friends because many people speak my language; same in the house. . . . Just at the school is when I have to think about English.

So I asked my dad [the] first time to help me go to school. When I asked my dad to help me go to school and he didn’t, I started going to English classes. I had a little bit of English knowledge from my native country, but the thing is that this accent is different. The words also [are] way different. And the English they teach in my home country is different, so I basically had to learn how to pronounce everything again.

Theo. It was bad at the beginning because my English wasn’t as good as I think it’s now, so I failed the test. I felt like because my English was too low, I wasn’t at a college level, so I had to take two ELI classes. I got my score way up to where I’m at right now. . . . [Enrolling] was actually pretty easy because one of the

advisors speaks Spanish. He's Black, too. I don't know where he [learned] Spanish. It was easy for me because we were speaking the same language. He got me to the right people to finish my enrolling. . . . I feel comfortable reading English and even having a conversation [of] no more than 5 or 10 minutes. In the long run I feel my speaking is not at [the] college level.

That's why I would say . . . that the college should have people that can speak Spanish. It makes it easier and simple. . . . Say I go to the library and need help. I am asking the lady and then she is trying to explain to me. I know she is trying because they are very nice. But it takes some time to explain. Then another person, two people, three, and four people come in and wait behind me. I feel like I am taking their time. So I tell the lady I understand and leave. Ok, maybe if she can explain in Spanish, I will be done.

I use the online a lot. [I] like to watch YouTube videos of milling, welding, and everything. I can do that [at] night . . . maybe translate to Spanish and take my time to learn.

Even when I have to ask the guys in class a question, I will send them text messages because I can write better than speak and don't want to look stupid because I cannot speak.

Astrid. English is okay. I took English classes, but it was very fast. . . . I learned a lot but I have the kids at home and my wife. We speak English because they don't understand my language. My little kids, they say, "Daddy, daddy, daddy, what did you say?" when I talk to my family [mainly my parents]. I wish they

[would] learn my language, but the English help[s] me at home. I think I learn faster because of my wife and kids.

When I come to school, I just have to pay attention to the words, write them down and go home to check, because I can't ask the people in class. Maybe they think I don't know or something.

Sometimes I have difficulties in understanding the language, but the topic is always easier for me, and that matters to me. I always solve the problem very easily, like that. In college, the experience in the classroom and the instructors' tongue makes a big difference. I could not understand at the beginning. I told the instructors [about] the problem, then they also started presenting and writing on the whiteboard, and then I extract[ed] thus and [gained] the knowledge, learning. . . . Now, it's not so hard to understand the tongue. . . . I bring the notebook every time and thus write out everything. Then right after the class, I usually will see the instructor at least for over 2–3 minute[s] . . . and . . . [have a] conversation. I raise the problem like that and . . . in return they help me, and now I'm doing everything quite better.

At the beginning, I [felt] uneasy, [tense], and lonely . . . because of the tongue and thus, from [being from a] different part from the world. I was from a different part and thus too, the written, it [was] very hard, and the tongue.

For my classmates, thus, I could not understand what they were telling the instructor. When my classmates [spoke] . . . when they [were] asking or reading questions to the instructor, I was confused and ask[ed] myself, "What did they say?" I was not understanding anything when they [spoke]. They were not [having] any concern [for] me. Everything was moving fast. [I] was uneasy.

They were not also talking to me. Like I [had] myself and . . . I was there alone over a year, lonely and scared. But, I came here [to] study. I do know that . . . life is [a] challenge. I know it. Yeah, I focused on . . . study[ing]. Simultaneously thus, the instructors were helping me.

When my classmates started talking to me, I [did] talk to them. . . . Whenever sometimes they [had] difficulties or I [had] difficulties and I ask[ed] . . . them, they [would help] me.

Kaiaffe. To do anything, I need English. In my home country, I learn[ed] some English, so writing is not a problem. I struggle to listen and speak here a little. Yes speaking is a problem because of the accent, but not writing.

When I started . . . school, I took [an] English test and pass[ed] the test. But I still need help because, even when I come to school, I have try and remember to change to English. Sometimes in class, I will say something and my classmate[s] will ask me, “What [did] you just say?” and I will tell them, “Sorry.” . . . Maybe practice will work. More practice . . . will be good for me.

I try to speak [English all the time], but there are not many people to speak to after I leave school to work. All the TV, newspaper[s], and movie[s] I watch is from my country. I also listen to radio, but online from my country.

I use the phone to translate some words sometimes in class, because I don’t have anyone and time. [The] best way for me [is] to check by . . . phone—very helpful, the phone and Internet.

As a result of their limited English skills, participants utilized several means to engage, communicate, or seek resources. Examples of such adaptability included use of smart phones to translate, the Internet, or electronic boards on campus to seek information.

Technology and Online Engagement

I use online for schoolwork and do it myself. If I have a question, maybe I will text someone from class, because that will also keep the document on my phone for the future. If I ask them in class and they don't understand my English, then I look stupid. (Theo, research participant)

Although not many participants' comments were specifically about their use of technology, many relied on the Internet, whether by themselves or with someone's help, to research college and career information. All of the participants at some point had used the Internet to research college or career information for which they could have seen an advisor, counselor, or even a faculty member for help. Rather, because of their perceived limited English skills, participants depended on online resources. Participants also thought that coming in to seek help face to face could be wasting staff time, although they commented that staff made every effort to help. For some participants, it was their perception of a stigma that resulted in their decision to not appear as unintelligent when they could not understand instructions or conversations with staff, faculty, and peers. These perceptions discouraged participants from visiting face to face with faculty and staff. Instead of coming in to see an advisor or counselor, participants preferred using e-mail to engage with faculty and staff. Participants also preferred using texting and other forms of social media, including Facebook and Snapchat, as methods of communication and engagement with their peers. With a simple text- and Internet-enabled phone and a free college wireless network, students are not only

able to engage and connect with peers, faculty, and staff, but they can also use the digital technology to record and take class notes, complete real-time research and English translation, and keep track of class performance and grades without “bothering” the faculty.

Besides using the Internet and texting to engage with their faculty, staff, and peers, participants also relied on such technology to seek out, engage, and interact with other students from similar backgrounds outside their campus. These online communities often served as participants’ social networks to develop social capital, building on an awareness of resources on and off campus and creating “accountability buddies” who participants relied on for support and to cheer on each other to accomplish goals.

Avelino. I am not the kind of person to be online, but I mostly use texting and other apps, like WHATSAPP, to chat with friends. . . . None of them are here in the school. Some of the guys from high school I said earlier live together and I live at home. So any chance I get, we are texting. . . . I don’t really blend [in] with the guys in the program; [I] mostly come here and leave after class. They are cool, but the thing is, what are we going to do or talk about? We are all busy. It’s nothing, because we all work and have other things to do. For me, I already think I am late. I should have been in school just after high school, so nothing like that at all with hanging out or seeing anyone outside of the school. I mean, if we have to, that will be nice. Maybe like summertime or something, but for now, no.

I usually will look for classes . . . [and] all the information about [the college] on the computer. Everything is right there. . . . Also, I check the computer screens in the hallways and notice boards. They have information about classes, jobs . . . the one in the classroom has information about jobs, the hallway one by the elevator

tell[s] you what math classes you need for the degree you want to do. I show my friends a lot of that information in the hallways.

It all works out better for us to chat, texting or something. Like I said, we don't have time, so the little time we get, I will go online and look for whatever I need. Plus, all my classes are in the evening, and I am not sure there is anyone here beside[s] the teacher to help us with anything.

[As for] classmate[s], no; still now, no. . . . The instructor, sometimes they ask to do online homework, and thus I do and I mail to them also like that. There is no contact with . . . classmate[s].

Rowan. Yes, I do use the computer a lot . . . because that's how I find some things. Sometime[s] when I need something, it's easy to find online. Because . . . I come here to the school late and [I'm] not sure if anybody is here at that time. I just come from work to shower at home and come here. I come to class and go home [and] get on the computer if I find something in class that I need to check out. I use YouTube. . . . YouTube is always good for me to find more information. The video is great for me. Then I can show someone on the computer if they can help explain this for me in my language. Very easy, and it works for me.

I can't talk to the guys here a lot. Maybe you had [that] experience since you [came] here. Many people just come to take the class and go home. Even if we talk, [it's] nothing serious. Just maybe about the lab or in the classroom. All the homework is for you alone to finish. The lab we do all here. Maybe sometimes I come in early to finish my lab, but the instructor is here, so I don't need to talk to the guys.

Xanthe. Like I told you, I met my girlfriend online. I [could not] speak that well before, so I use[d] online to chat with people and meet people. A lot of us do that, especially [those of] us from somewhere else. The kids born here and not from [my (native country)], they speak like American guys. Some of them don't even speak Spanish. They are all here on the campus. They speak English back to you when you speak Spanish. But I am okay because my English is better. I speak English at home with my girlfriend, so I am getting better. For me, in school, at work and home, everyone around speaks English, and sometimes I still think in Spanish. I want to speak Spanish because I feel more comfortable and [it's] easy for me. So I go online to chat, to look for things like mechanical things, not music, cooking, or sports, or anything like that. I like mostly mechanical things, so I check out YouTube and other online website[s] that show mechanical videos a lot. I like the videos and then sometimes I have Spanish videos . . . it is so easy for me to understand.

Theo. I think there are people here to help. The only thing is that, because of my language, I struggle to get help because then there is someone waiting. The person at the office is trying to help, but you see someone waiting and there is no one who speaks your language. So it [would] help if we have people who can speak. . . . I go online and use my phone to find information, because that will give me time and also I can take time to understand what I need to do. Like I said, it's like the bank and doctor; they have signs everywhere in Spanish or someone to speak to you in Spanish. And when you are not sure, you can always get things done online in Spanish; even if English, I can take time to understand. Even for guys in the classroom, I have to sometimes chat with them online more because they leave to go

home after class, and sometimes I think we struggle to have the conversation in the classroom because we don't understand. I speak well, but to be honest, I think it also has to do with where I live and they live.

You just cross the street from where I live, and you are in an area where the schools are ranked among the best in the country. Where I live is considered very bad. You ask everybody, even the guys in the classroom talk about this all the time. So, if I hear them talking bad about where I live, which is true, then I don't think I can even invite them to meet or something like that. I sometimes don't even want to share with them I live there because they look at you different. So . . . I use online for school work and do it myself. If I have a question, maybe I will text someone from class, because that will also keep the document on my phone for the future. If I ask them in class and they don't understand my English, then I look stupid.

Astrid. [My family does] everything online; shop online, chat online, watch TV online. . . . Because I don't have time, thus online works for me. And thus the only time I have is after kids go to sleep [at] night. Before I do anything about school, I check online. When I want to register for the class, I check the times online or my wife will do it and tell me. She help[s] me a lot online, because she can't go to . . . school . . . because of work and my parents and the kids. So she checks online and help[s] me fill [in] the forms for the scholarship form, application, everything. I don't stay after school, so I text the classmates sometime. That is better because when I text and they reply, I have all the information I need. That way I can text them my questions and they text back. It's better for me than speaking to them there or on the phone. . . . They cannot understand on the phone [and] I cannot understand

on the phone, so text or maybe e-mail is better. They struggle to understand and I also can't get what they are saying with the tongue. So texting and sometimes maybe e-mail to them is also good idea. Sometimes when they call, I don't pick up because maybe I don't have a pen or I cannot write everything down. I have to wait to play the message or text them back to ask what they want . . . see how I do it? It's good because English is not my language, and I have to find a way [for it] to work for me.

Kaiaffe. [I go online] all the time. Even my first job I applied online. I learn English online, take one class online. . . . When I started ELI classes, I learned the letters and words online. Sometimes people say words [slang] that I don't know, so I go to the video online. Maybe I can't wait to talk to the professor, so I have to check immediately. When I write, it's good, but the hearing and speaking. I like in the morning to play and listen to the words on my phone to prepare me for work and when I am coming to school. I come to school . . . 40 minutes before the class to practice English. [I] just sit down and listen to the words for the class in the book. It has worked for me. For my class guys, no. Maybe [we] just . . . talk in the lab or something, but we do the work together before the class is finished. We do not call each other or do anything outside the class. Mostly anything at the school before 3 o'clock I am not here. I try to read more online and especially about my country. So I am chatting online, reading about the school work and my country, and watching YouTube videos about the lab and machine, welding, or anything.

The decision by participants to adopt and integrate online and digital technology with their academic coursework and social networks stems from similar experiences among participants: (a) the realization that language is a barrier, (b) the motivation to find avenues to

overcome barriers, (c) the sense of safety online, (d) the need to form relationships that support them, (e) the need to make communication easier, (f) favoring convenience and control of engagement, and (e) being able to save and return to saved material in the future. The participants' comments above indicate that the use of online and digital technology enhances participants' learning by providing a safe engagement environment. Participants can easily express their thoughts and not be concerned about being perceived as unintelligent and as well are able to rapidly research and communicate any academic and personal information to their faculty, staff, and peers who may even be enrolled in college miles away.

Summary

Chapter 4 provides a summary of the study's participants; rich, thick textual descriptions; the categorical coding matrix, the findings from the interpretive phenomenological analysis of the data, and a detailed description of themes revealed after examining the engagement experiences of each participant to understand the engagement experiences of adult English language learners enrolled in an advanced manufacturing program at a Midwestern community college. This chapter also provides a review of the theories adopted and those that emerged from the study: adult learning theory and motivation theory. Four themes emerged to answer the following research questions: (a) What are the perceived on-campus engagement experiences and social networks that support and promote success among adult ELL students in advanced manufacturing and (b) are there perceived engagement experience issues and barriers for adult ELL students. These four themes were:

1. faculty and employer partnerships and understanding,
2. multiple life roles,
3. language, and
4. online technology.

Chapter 5 includes a discussion of the research results, the study's delimitations and limitations, implications for practice, and suggestions for future research.

CHAPTER 5. DISCUSSION

Conclusions

Themes Summary

One of the many themes that emerged initially among the participant comments and experiences from the interviews was the language. All of the participants, in sharing their engagement experiences, pointed out that their ability to successfully engage with their community depended on their ability to speak, understand, and be understood. Socially, all participants felt connected with their local communities and work, because most were able to speak their native language in those venues. It was when they were on campus that English language became an issue. However, this issue did not hinder their interaction with peers, faculty, and staff. Participants felt that, to expedite their understanding and completion of required paperwork (for financial aid, registration, etc.), advising, and career counseling, they could benefit from being able to work with someone speaking their native language when working with student services. In class and with peers, participants felt they got by with their limited English conversational skills.

Delimitations and Limitations

Three delimitations were identified for this study. The delimitations involved the study participants and the site. For this study, participants were selected from a pool of adult ELL students in advanced manufacturing. All of the participants were male and enrolled in advanced manufacturing. This major-specific and gender imbalance pool limits the generalization of the findings to all adult ELL students enrolled in community colleges. The institution selected for this study was a large community college with an enrollment of approximately 37,000 students located in a suburb of a major midwestern city. The choice to

conduct the study at a large suburban community college may limit the ability to generalize findings to smaller community colleges and those located in urban settings.

The limitations of this study were attributed to the design, prospective participant pool, unique characteristics of individual participants, timing of the study in relation to political climate, and data collection techniques employed. Although the diversity within the college and community made the site attractive for the study, the pool from which to choose possible research participants was very small. All 12 prospective participants were male, employed full time, and enrolled in evening classes part time. Traditionally, advanced manufacturing is dominated by males, something that was reflected in the candidate pool, the participants for the study, and classroom observation. Because the majority of the research participants were natives of Latin American countries, they had similar language, cultural, community, and engagement experiences. Thus, the participants for the study were a very homogenous group.

I could have benefited from staying at the site longer. Although the participants had busy schedules, they opened up and replied to my e-mails and texts promptly before we had our interviews. After the first interviews, participants replied to my text to thank them with comments such as: “You are welcome; thank you for talking to me”; “Have a safe trip back home. Let me know if I can help with any questions for your project”; and “What did you say your school was called again [where] you worked?” I could have collected additional data if I had spent additional time on site. I built very strong relationships with the participants, but felt the study was ending just when the relationships were getting stronger and the participants increased their trust in sharing information with me.

All the interviews were conducted without a translator. Although language was not necessarily a barrier, I believe some participants could have opened up and provided additional data for the research if they were asked and answered the questions in their native language. Based on some of the participants' comments, they preferred conducting business or conversations in their native language, as they are able to express themselves better and to the point. For future studies, I recommend that researchers utilize an interpreter for interviews.

Also, after the first interviews and my initial face-to-face contact with program faculty to discuss my classroom visit, it was obvious that faculty played a major role student engagement experiences. I believe faculty interviews could have generated additional data for the study as well as added to the triangulation of the data collected from participants. Unfortunately, due to the limited time period of the study and because I did not have faculty interviews as part of the data collection methods, I was unable to conduct any interviews with faculty. Anybody conducting a future replication of this study should strongly consider including faculty interviews to the data collection methods.

Ethical Considerations

Watkins (2000, as cited in Madison, 2012) pointed out that researchers must consider the possible negative impact of the study on the participants and population being studied. Watkins proposed guidelines and suggested the following to researchers:

- Identify at the outset possible personal, social, and political implications that the publication of factual data will have on the studied population.
- Involve the study population throughout the entire process to ensure that cultural context is represented as much as possible.

- Weigh the scientific and anthropological importance of the data against the possible harm to the study population.
- Integrate the data so that the cultural context is fully explained.
- Present the data in such a way that sensationalism is minimized while the contextual comprehension of the data is maximized.
- Report truthfully any scientific or cultural biases that may be inherent in the presentation of the data.
- Explain the importance of the data both to the scientific and local communities in a language understandable by each community, and disseminate the information in both communities as widely as possible.

Several ethical concerns were considered during this study including the challenges of face-to-face interviews, the possible negative impact of study on the participants or group being studied, the relationship between the participants and me, and sensitivity to participants' culture and time. Although face-to-face interviews are effective in collecting rich, firsthand qualitative data, the nature of face-to-face interviews can also present some challenges to both the researcher and participants. Because of the nature of this research and the population being studied, I was very sensitive to participants' time and culture. All six participants had full-time jobs and other commitments outside of class. The time given for the interviews were valuable time for the participants, and I wanted to treat their time with the respect it they deserved. All participants arrived at their interviews late due to work or family commitments, which meant they needed to leave the interview sooner than planned for class or other commitments. All of the participants contacted me by text to let me know they were coming in late for the interview and the reasons why. Some asked specifically

when we were going to be finished with the interview so they could plan on child pick up, class attendance, traffic back to work, and church. When they did not ask, I asked each participant how much time they had and to let me know if they had to leave before the agreed upon time. Each had a cell phone that they would look at often to scan (but not read) text messages while talking or when I asked follow-up questions. I made sure to stay on task throughout the interviews and sat just across from the clock in the classroom.

Second, given that this study dealt with participants from groups that are often underserved and underrepresented in higher education, there was the potential that participants might feel pressure to answer all the questions designed for the interview because the researcher could be perceived as holding a position of power. All these considerations were incorporated during the research design stage. Every precaution was taken to ensure that all the participants felt safe and comfortable and that the information was kept confidential. Participants were advised they could terminate the interview at any time and that they had the freedom to withdraw from the study if they felt the need at any point. Participants were assigned a pseudonym to protect their identity once they signed the consent forms and were officially identified as a study participant. All of the password-protected files (pseudonyms, digital audio recordings, observation notes, and transcripts) were saved in my highly secured university-provided CYBOX account.

Implications for Policy and Practice

The purpose of this study was to provide community college leaders, faculty, and staff additional information about how best to design and implement unique policies that promote effective interaction experiences that have positive meaning and promote student success for adult ELL students. Based on participants' comments as well as my

observations, reflection notes, and the review of literature, the following key implications for policy and practice emerged for community colleges to consider if they want to meet the needs of their adult ELL students.

Partnerships with Local and Regional Employers

Because students placed a high value on the engagement between them, their employer, and the college (specifically faculty), it is essential that college leaders seek partnership opportunities with local and regional business leaders. These partnerships, if successful, can provide avenues for engagement between the college and business community as well as combine the resources from both entities to enhance students' engagement experiences both on campus and at the students' workplace. Ideally, such a partnership between the employer and college (faculty) would focus on:

- Designing suitable initial student assessment and placement;
- Tailoring and outlining programs for the specific needs of the employer;
- Involving faculty in referring students to the programs;
- Implementing flexible class schedules and class options that fit the employer, student, and faculty needs; and
- Providing a clear pathway for programs leading to accelerated completion.

Connecting what students learn directly to their work enhances and makes the college–work experience meaningful. In such apprenticeship partnerships, the employer could pay for the tuition and other related expenses, which in turn reduces the stress of students needing to work extra hours to pay for classes and other college costs, providing students the flexibility on campus to engage in school-related work and encouraging students to enroll in additional classes and graduate early to return to work. For students, such

apprenticeship partnerships could offer practical work experience as well as an opportunity to build relationships with potential future employers.

Knowledgeable Counseling Staff

College administrators should consider hiring and training counseling professionals knowledgeable about adult student mental health issues. Adult students often enroll in college due to a “life crisis such as divorce or separation, work issues, or some form of individual need such as seeking career and financial stability” (Kasworm, 2008, p. 28) and may “display emotional chaos as they develop a student identity, contemplate future success in a collegiate classroom, and psychologically manage their turbulent life circumstances” (Kasworm, 2008, p. 28). For ELL students like the participants in this study, the transition experience alone as refugees or immigrants from their native countries, especially for those who had experienced war or violence in their native countries, can be challenging and have lasting mental health effects on the student. The negative past experiences of war and roles the students may have played can lead to anxiety, mental health, and emotional issues for students coming from war-torn countries. These issues are often not considered and discussed during normal college advising or counseling sessions when working with this population.

Although not a major theme, comments by participants who migrated from war-torn countries showed that students still held emotional and tragic memories, which may have affected their interaction with not only their class peers but also members of their wider community on and outside of campus. For some of these students, the college counseling staff may be their only point of mental health support and thus who they may share information with while enrolled in college. Knowledgeable counseling staff members who

possess the tools to engage appropriately with this population have an opportunity to help support the student in opening up and engaging with the campus community.

Ongoing Professional Development for Faculty and Staff

Members of the adult ELL student population, although very unique and fragmented, come up against very similar barriers for engagement experiences. Often, their main and only meaningful engagement experiences on campus may be a faculty or staff member with whom they connect. Their connection with an individual from the college may be due to shared cultural or life experiences, other interests, similar backgrounds, or the showing of concern and providing support to the student. Colleges should provide educational and cultural training opportunities for faculty as well as administrators and staff. Such training should lead to the rethinking of the role of administrators, faculty, and staff in improving the engagement experiences of all students, especially adult ELL students who are usually enrolled part time, work full time, and have multiple life roles and responsibilities outside of school.

When asked to further explain his comment that “the teacher went out of his way to help me out to understand things that I did not understand. He stayed . . . three minutes after class to explain things, and I did not feel stupid . . . [or] dumb,” Rowan said,

He cared and showed me that, in America, when you work hard, people are watching and will help you. I show up to class, do the work, and ask questions, and always [talk] to my teachers if I have a problem. In the beginning of class, I was scared and lonely because I did not know anyone.

Opportunities for faculty training should focus on preparing faculty to show that they care—by helping address students’ academic and nonacademic concerns including faculty

tutoring in a safe and encouraging environment in which students don't feel "dumb"; setting equally high expectations for adult ELL students as they do for their traditional and native peers and not "dummying down" expectations; having a clear but flexible attendance policy; and assigning projects that are connected to students' life roles at work, their personal lives, and their career pathway. For students with nonacademic needs—mental health, financial, housing, etc.—preparing faculty to engage, identify, and refer students to resources can help enhance students' engagement and success on campus.

Faculty play a major role in student interaction, especially for adult ELL students. Because they are often the only college representatives with whom students interact during their time on campus, it is essential that faculty have time and be available outside of the normal class and lab period to meet with students. Unfortunately, the majority of the faculty who come in contact with adult ELL students, who are enrolled mostly in evening classes, are part-time faculty who have their own full-time employment commitments outside of teaching. Such situations can lead to a lack of connection between the teacher and learner (American Federation of Teachers, 2008). Because these students have limited availability outside of class and spend less time on campus compared to their traditional peers, experiential learning beyond the classroom that can provide opportunities for faculty to supervise students experience in and out-of-class can be beneficial.

A 2016 report by NCES, the primary federal entity for collecting, analyzing, and reporting data related to education in the United States, showed that, although the number of full-time faculty at degree-granting postsecondary institutions increased by 45%, the number of part-time faculty increased by 104%. The same 2016 report by NCES showed that, in Fall 2013, of all full-time faculty at degree-granting postsecondary institutions, 43% were White

males, 35% were White females, 3% were Black males, 3% were Black females, 2% were Hispanic males, 2% were Hispanic females, 6% were Asian/Pacific Islander males, 4% were Asian/Pacific Islander females, and less than 1% were full-time faculty who were American Indian/Alaska Native. Clearly, if this trend continues, college administrators will need to implement innovative programs to attract, retain, and have incentives that encourage meaningful adjunct faculty–student engagement.

Partnerships with Local Nonprofit Agencies

Because the path to college for many participants went through adult basic education, in addition to those who also mentioned their experiences at the K–12 level, it is essential that college administrators work closely with educational institutions as well as governmental and social services agencies such as United Way, K–12 partners, and refugee agencies who have similar goals to fund, combine local resources, and share expertise to benefit students as well as enhance their efforts to serve this population. The findings from this study indicate that, as part of the effort to engage adult ELL students, colleges need to partner with local nonprofit agencies who often are the first to serve and introduce students to local educational and career training opportunities.

Because of the unique services they provide, including English language learning, housing, transportation, healthcare, and employment assistance, staff providing these services build relationships and become reliable partners for colleges. State and local governmental organizations, K–12 partners, and other organizations, such as United Way, are key players in engaging students on campus. In addition to the services listed above, these agencies often help students develop host-country language proficiency as well as obtain a high school diploma or equivalent. For the six research participants in this study, the onramp to

postsecondary education and career training started at the basic educational level, which included working with local nonprofit agencies. Thus, these aforementioned agencies can be a major force and play a critical role in building the human capital for immigrants.

Use of Technology to Engage Students

The use of online resources, whether to support academic and career exploration or used as a social network, was clearly more popular than I expected among this group. For self-directed students, an online platform allows for moving from a dependent delivery system toward a more self-directed one (Calhoun & Green, 2015). Although all of the participants depended on online tools, such as YouTube, to support their classroom and lab learning, the majority of participants used social network platforms and texting as the preferred alternative to face-to-face conversations between them and their native peers. Some participants pointed out that they excelled in using online tools to complete high school credentials and continued to favor that option for their postsecondary education.

Colleges can do more to expand and support adult ELL students in higher education by exploring online and other distance lecture delivery options suitable for the unique preferences and abilities within this group of adult learners. Faculty should be aware, trained, and encouraged to create and use electronic chatrooms and options to build online classroom communities. This will encourage adult ELL students who feel alienated and concerned about their English conversational skills to become more engaged with their peers and campus. Additionally, from participants' comments, the flexibility to review class video and notes, testing, accessing materials and engaging faculty and peers at students' own pace and time online is a strong advantage for English language learners.

Recommendations for Future Research

A distance education option could encourage and expand opportunities for adult ELL students with multiple life roles outside the academic role. Students living both closer to and farther away from a campus could then have easier access postsecondary education. Others with commitments and barriers, such as child care, work, health, and transportation, also could have easier access to such opportunities without being required to travel for face-to-face engagement.

A major limitation of this study was the homogeneous makeup of the study participants. All participants were male, worked full time, and were from very similar backgrounds in their native countries. Nationally, there is a high percentage of males in advanced manufacturing, so the participant pool for this study is a representation of the national trend. Any future research about adult ELL students in advanced manufacturing should consider exploring the unique population-engagement experiences of adult female ELL students in advanced manufacturing. Due to the expected limited participant pool, my recommendation is that future research be regional and include multiple sites. This will allow for a higher number of qualified participants for the study.

Another related topic that can be investigated further by future researchers is advanced-manufacturing faculty perceptions of adult ELL students in their programs. Because my study data collection involved only observation and interviews, I did not visit with the program faculty much about their engagement and perceptions of adult ELL students in their classes. During the interviews and class observation, I overheard students make comments about their peers and faculty in class. Although they were positive comments, this could be investigated further.

Also, investigators interested in studying adult ELL students should consider exploring the engagement experiences of ELL students in degree programs that adopt a distance learning platform. Besides the flexibility provided by distance learning, especially for adult ELL students who may be employed full time and have family commitments, the opportunity to complete a degree online with limited face-to-face contact may appeal to ELL students. Participant comments from this study support the notion that, if given the option, ELL students prefer to perform their day-to-day business, including even finding a spouse, online. For ELL students, face-to-face interaction with an instructor, staff, or peer can be uncomfortable and lead to a feeling of being perceived as unintelligent if they cannot communicate or understand. For this population, as the use of online instructional technology grows and expands opportunities for all students, future research needs to be conducted to gain a deeper understanding of the engagement experiences of adult ELL students in distance learning programs or classes.

Finally, because some of the participants expressed concerns about their K–12 education after migrating to the United States, I encourage further studies that explore the engagement experiences of ELL students in the K–12 system. In particular, because of the importance of socialization for that age group, I recommend that the focus be on the freshman through senior years in high school. From this study and available literature, this K–12-level group is growing and thus is expected to become a major part of postsecondary education. During the 2013–2014 school year, more than 4.9 million ELLs were enrolled in U.S. public elementary and secondary schools, representing just over 10% of the total student population (McFarland, 2016).

The United States continues to be the first country of choice for immigrants. The majority of these immigrants are of working age and come from countries where English is not a primary language. Data from the K–12 level shows that the number of nonnative-born students in the United State is growing. These groups of new residents come from unique backgrounds (geographic, age, education, family type, reasons for migrating, religion, etc.). However, the two main common characteristics that they share are that many are nonnative English speakers and many need training to become employable after migrating to the United States. Educational and student development researchers are still at the infancy stage in researching the engagement experiences of this group on college campuses and at all educational levels for that matter. Importantly, there is an urgent need to understand the meanings students attach to their shared engagement experiences. Although previous researchers in student engagement have focused heavily on mostly traditional and residential students, their studies provide a solid base for future studies. Additional research, including that recommended above, can be conducted by adopting various qualitative study approaches to gain useful knowledge and information. Such knowledge and information will contribute to the literature as well as provide policymakers and practitioners the needed tools to design and implement programs that fit this unique population.

Reflexivity Statement

In a way, the timing of the study was both a blessing and a potential problem. With the political climate surrounding the 2016 presidential campaign in the United States, during which immigration became a hot topic, I was concerned about the initial e-mails and phone calls to participants. My concern was confirmed and heightened when prospective participants demonstrated some hesitance over the phone or in their text. During the initial

phone calls, some of the participants questioned who I was and where I was calling from. This was even after I had e-mailed them and confirmed they had received and read the consent document. A few candidates called or texted back wanting confirmation about who I was and exactly what my study was about. One candidate who participated in the study asked on the phone, “Is this like politics or something? I don’t have time right now. Where are you calling from?” Some only chatted by text and would not confirm where they would like to meet but, rather, asked me to find a space and let them know. Prospective candidates’ questions and answers were very short by text or on the phone calls. I suspect that the timing of the interviews, coinciding with a political season that was heavy with immigration policy, created fear among prospective candidates. This was evident in some of the participants’ answers about privacy and sharing of personal information with “people I don’t really know because you never know they may be after you” and “people think we come to this country to steal, drink, have fun, and don’t do anything good in this country.” To overcome these fears and suspicion, I spent a considerable amount of time building relationships with prospective participants.

Throughout the interviews, I personally related to many of these new immigrants in many ways. I realized that the emotions and motivation to leave one’s native country have stayed the same. Whether due to civil war or natural disaster, better economic opportunities, family reunification, or to pursue further studies, each of the adult ELL students had mixed emotions when commenting about the process of leaving their native land to come to the United States. Families were split apart and were still adjusting to the weather, food, and clothing in their new country. The guilt of missed cultural celebrations, including births, funerals, and religious and family holiday traditions, were always on the minds of

participants as they questioned whether their decision to migrate actually was worth the move. However, all of the participants had hope and were motivated by their belief that completing career training would bring them better paying jobs, extra income, extra time with their families, and maybe an opportunity to visit their native country.

Prior to beginning the study, I was very positive and thought I was prepared. Nothing could have prepared me for the overwhelming and detailed experience of this study. From the point of getting my IRB approved by both my home and host institutions to collecting the list of prospective participants; the unknown fear and anxiousness about prospects' interest; scheduling appointments and making sure they were coordinated, the initial face-to-face meetings with participants; and collecting, sorting, and coding data—every stage required detail and flexibility on my part. When the process seemed long, tiring, and lonely, I always came back to why I was engaged in this study: I really looked forward to listening to the stories of participants. The experience was overwhelming but manageable because my research classes and capstone experience provided me with opportunities to practice.

The observation was stressful and tiring. After the long drive to the site, I had two interviews, classroom and lab observations, and spent most of the night taking notes. While in the classroom, I felt like I was invading the space and was not sure if writing was appropriate. I got the approval from the instructor to come in late because my interview appointments ran late. I was not really sure what to write because I joined the class about 20 minutes late, and there was lots going on in the classroom. I was not sure what the effect of my presence in room would be, although the instructor had already mentioned my presence in the classroom. I was tired and concerned that I was missing something, especially in the

lab. I was relieved when the fire alarm went off and I was able to get a 10-minute break walking outside the building.

As the sole researcher and observer in an active lab, I could have used a second observer. As I mentioned earlier, I felt like I was missing something all along, which probably resulted in me not paying attention to other items. A second observer would have been helpful so I could cross-check with his or her observation notes for any similarities and differences.

In summary, although there have been many studies conducted and frameworks developed in the area of student engagement, the majority of these studies and dominant frameworks have focused on traditional-age college students and have “not taken into account the complex maturation and experiential base of lifeworld-shaped identities of the adult collegiate student” (Kasworm, 2005, p. 3). The majority of the researchers who have conducted studies over the years about adult student engagement experiences have approached these studies from a deficit standpoint. Adult students’ age, life commitments and experiences, work, etc. have been viewed as deterrents rather than as benefits to academic success, especially with regard to the cost–benefit analysis and economic impact of retraining. Clearly, there is not enough recent adult student engagement research to support the increasing adult population and the unique subgroups within this population. There is a need for new research and a new approach to adult student engagement that focuses on the wealth of the abundant experience adult students bring to classrooms and college campuses.

The scarcity of current research is alarming for adult students from ELL backgrounds. Among the adult student engagement studies conducted, few studies dealt with adult ELL student engagement experiences. Most immigrants come from non-English native speaking

countries (top 10 countries) and thus have a need to build and improve their English skills. Community colleges, often the site for intergenerational learning, have “historically offered a dominant collegiate place for adult learners” (Kasworm, 2005, p. 4) and are often the place where immigrants choose to build their communication skills or seek career training and advancement. It is critical to explore, understand, and explain the “lived experiences” of this unique, underrepresented, not often discussed, but growing population. It is of great importance for college administrators to understand the changing demographics of adult students. Administrators need to understand students’ struggles and needs and then develop strategies to support their engagement experiences and persistence toward academic success. It is important that these understanding and strategies be grounded in research and best practices. The practical recommendations from studies such as this will benefit community college leaders and other organizations with similar goals in setting up adult ELL student programming.

I feel very blessed to have become lifelong friends with some of the study participants. Since the study concluded, I have been in touch with three out of the six participants. All of our communications have been through text messaging to check on family and discuss soccer, progress in school (both theirs and mine), and career stages.

APPENDIX A. CORRESPONDENCE WITH INSTITUTIONAL REVIEW BOARDS

From: [mailto:]

Sent: Tuesday, May 17, 2016 9:47 AM

To: Agyeman, Ahmed K. <akonwana-agyeman@dmacc.edu>

Subject: RE: dissertation

Mr. Agyeman: I have spoken with the associate dean in our department that handles the manufacturing programs you are focusing on. Many of our technical programs allow students to co-enroll while still in developmental English and ESL courses. They do not have to be 'college' ready in English to enroll in many of our industrial programs. Therefore, I can offer approval, but only on the condition that you revise and resubmit your methodology to address the following.

- Since you will not be translating informed consent documents into students' native languages, you will need to demonstrate that they are written at an English reading level no higher than the 10th grade.
- Interview questions also be at an English proficiency level no higher than 10th grade.
- The classroom is not a public setting; therefore, when conducting in-class observations, informed consent of the class will be needed. You will need to announce and briefly explain the reason for your presence. You may assume consent from the students unless someone objects. Verbal consent can be assumed if you hear no objections to asking something to the effect of: "is that alright with everyone?". Again, this informed consent should be communicated in simple English.
- XXX-IRB approval would be contingent on the approval of your home institution's IRB approval. Thank You.

Hi Ahmed,

Thank you for letting me know that you would like to attend the **June 1st, 2016** IRB meeting. I anticipate that your study will be reviewed at approximately 2:40 PM. Please note that this time is only an *estimate* dependent on how the meeting is running.

The meeting will be held in **3590 Beardshear Hall**. You may wait in the hallway until I come out to get you. I suggest bringing something to occupy yourself, should we be running behind.

If you have any questions or concerns, please let me know.

Thank you, [REDACTED]

IRB Administrator

Office for Responsible Research | Iowa State University

1138 Pearson Hall | Ames IA 50011

515-294-4566 | 515-294-4267 fax

IRB Committee [ORR] <irb@iastate.edu>
 to: "Onwona-Agyeman, Ahmed K" <aagyeman@iastate.edu>

cc: [REDACTED]

date: Thu, Jun 9, 2016 at 10:39 AM

subject: IRB Review for #16-245 (Onwona-Agyeman)

Hi Ahmed, I am writing regarding the IRB's review of your study #16-245 "Engagement Experiences: Adult English Language Learner Students in Advanced Manufacturing at a Midwestern Community College" which occurred during Tuesday's IRB meeting. The committee has requested the following minor revisions and clarifications:

1. Per our discussion during the IRB meeting, the proposed process for obtaining signed consent will no longer involve asking participants to return signed consent documents via email. The consent process will occur as outlined in Part J of the IRB application, *except* participants do not need to return the signed consent document via email; instead, you will obtain signed consent in-person when you meet with them. **Please let us know if this process will work for you.** We will update the IRB application by hand to note the change.
2. The IRB asked for some revisions to the informed consent documents for your study. They are as follows:

Interview informed consent document (Appendix C)

- ☐ Please update the "Risks and Discomforts" section to inform participants that some questions address topics they may find sensitive, and that they may experience some mild emotional discomfort (e.g., "Some questions might be sensitive and cause some mild emotional discomfort.").
- ☐ Please also add language informing participants about the possibility of deductive disclosure: for example, "We will take steps to protect your confidentiality when results from this study are shared. However, it is possible that someone familiar with you or your experiences may be able to figure out figure out who you are."
- ☐ The IRB recommends replacing the reference to the specific date for data destruction to a more general statement (e.g., "All collected data will be retained until the project is complete and destroyed after that time"). We usually recommend against including specific dates in consent documents because plans often change—we want you to have sufficient flexibility if the project takes longer than expected, or if you decide to continue using the data.

Faculty Observation Consent (Appendix D)

- ☐ The IRB recommends replacing the reference to the specific date for data destruction to a more general statement (e.g., "All collected data will be retained until the project is complete and destroyed after that time").

Student Observation Consent (Appendix E)

- ☐ As we discussed at the IRB meeting, some students may be in multiple sections of the classes/lab you observe. As such, please update the first bullet in the "Description of Procedures" section to inform students that to indicate that students may be observed more than once.
- ☐ The IRB recommends replacing the reference to the specific date for data destruction to a more general statement (e.g., "All collected data will be retained until the project is complete and destroyed after that time").

Once I hear back from you and receive the revised documents noted above, our office can work to finalize the approval on behalf of the IRB. Please be advised that any changes made to your application or materials beyond what the committee has explicitly requested will likely result in further review by the convened IRB. If you have any questions about the above requests, please let me know. Thank you, [REDACTED]

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
2420 Lincoln Way, Suite 202
Ames, Iowa 50014
515 294-4566

Date: 8/2/2016

To: Ahmed K Onwona-Agyeman
3898 NW 102nd PL
Polk City, IA 50226

CC: Dr. Janice Friedel
N247F Lagomarcino Hall
Dr. Lyn Brodersen
11110 Extension 4H Building

From: Office for Responsible Research

Title: Engagement Experiences: Adult English Language Learner Students in Advanced Manufacturing at a Midwestern Community College

IRB ID: 16-245

Approval Date: 8/2/2016 **Date for Continuing Review:** 6/6/2017

Submission Type: New **Review Type:** Full Committee

The project referenced above has received approval from the Institutional Review Board (IRB) at Iowa State University according to the dates shown above. Please refer to the IRB ID number shown above in all correspondence regarding this study.

To ensure compliance with federal regulations (45 CFR 46 & 21 CFR 56), please be sure to:

- **Use only the approved study materials** in your research, including the recruitment materials and informed consent documents that have the IRB approval stamp.
- **Retain signed informed consent documents for 3 years after the close of the study**, when documented consent is required.
- **Obtain IRB approval prior to implementing any changes** to the study by submitting a Modification Form for Non-Exempt Research or Amendment for Personnel Changes form, as necessary.
- **Immediately Inform the IRB of (1) all serious and/or unexpected adverse experiences** involving risks to subjects or others; and (2) any other unanticipated problems involving risks to subjects or others.
- **Stop all research activity if IRB approval lapses**, unless continuation is necessary to prevent harm to research participants. Research activity can resume once IRB approval is reestablished.
- **Complete a new continuing review form** at least three to four weeks prior to the **date for continuing review** as noted above to provide sufficient time for the IRB to review and approve continuation of the study. We will send a courtesy reminder as this date approaches.

Please be aware that IRB approval means that you have met the requirements of federal regulations and ISU policies governing human subjects research. **Approval from other entities may also be needed.** For example, access to data from private records (e.g. student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. **IRB approval in no way implies or guarantees that permission from these other entities will be granted.**

Upon completion of the project, please submit a Project Closure Form to the Office for Responsible Research, 202 Kingland, to officially close the project.

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.

August 19, 2016

Ahmed K. Onwona-Agyeman
3898 NW 102nd PL
Polk City, IA 50226

Re: Engagement Experiences: Adult English Language Learner Students in Advanced Manufacturing at
Midwestern Community College
IRB Protocol Number 16.003

Dear Mr. Onwona-Agyeman:

Please be advised that your request to conduct your research at the
"Engagement Experiences: Adult English Language Learner Students in Advanced Manufacturing at
Midwestern Community College" has been approved. The IRB approved, by expedited review, the
protocol as described in your IRB application.

Your research project was approved by the Institutional Review Board (IRB) because it represents
minimal risks to subjects and falls under Category 2 of the expedited review.

*Research activities that (1) present no more than minimal risk to human subjects, and (2) involve
only procedures listed in one or more of the following categories, may be reviewed by the
through the subcommittee review procedure authorized by and*

Upon completion of your research project, you should inform our office of the date of your last data
collection. Please contact me at if you have any questions. Please accept my best wishes
for your research project.

Sincerely,

IRB Chair
Executive Director
Institutional Effectiveness, Planning and Research

APPENDIX B. INVITATION E-MAIL TO PROSPECTIVE PARTICIPANTS

Dear Student,

My name is Ahmed Onwona-Agyeman. I am a graduate student at Iowa State University working on my doctoral degree in Educational Leadership and Policy Studies. As part of my doctoral studies, I am conducting a study on adult non-native English speaking students in Industrial and Manufacturing Technology at your college.

I have attached information about the study to this email and invite you to be part of this study. Your participation in this study is voluntary. You do not have to participate in the study. You will not be affected in anyway if you decide to take part or not take part in the study. You are free to decide.

I am aware that this email and future forms, interviews, and communication might contain words that you may not understand. If you have problems understanding any research forms or interviews questions at any time during the study, please feel free to ask me. I will stop and take time to explain further.

Please reply to this email with a preferred phone number and a good time when I can call you. I can be reached at 515-360-2541 if you have any questions about this study.

Thank you,

Ahmed Onwona-Agyeman

APPENDIX C. PARTICIPANT CONSENT FORM

Title of Study

Engagement Experiences: Adult English Language Learner Students in Advanced Manufacturing
at a Midwestern Community College

Investigator: **Ahmed K. Onwona-Agyeman**

This form describes a research project. It has information to help you decide whether or not you wish to participate. Research studies include only people who choose to take part—your participation is completely voluntary. Please discuss any questions you have about the study or about this form with the project staff before deciding to participate.

Introduction

The purpose of this study is to explore and gain an in-depth understanding of the day-to-day lived engagement experiences of adult ELL students enrolled in an advanced-manufacturing program at your community college. You are being invited to participate in this study because you are an adult ELL student enrolled in the advanced-manufacturing program at your institution.

Description of Procedures

If you agree to participate, you will be asked to:

- Take part in two, audio recorded, an hour and a half, face to face individual interviews
- Each session will be held off campus or at your preferred location
- Provide narratives that will be edited to omit names, places, people, and corrected for grammatical corrections and clarifications.
- Review copies of the actual full interview transcripts (audio, hard copies, electronic, researcher read to you, etc.) a week after each interview and your narrative contribution for the final study report.
 - Goal is to review and edit for validity and your thoughts
 - Not so much on grammar and controversial language
 - Awareness of feelings and thoughts when reading the transcripts
- Questions to be covered in the interview will include:
 - Your family, educational, and professional background
 - Major life events
 - Your attitude toward being an adult ELL student in the advanced-manufacturing program, specifically;

- Faculty, peer, and staff interaction, application, assessment, enrollment, technology, classroom culture, training, expectations, support system, and your goals.

Risks or Discomforts

The research questions address topics that you may find sensitive. When answering these questions, you may experience some mild emotional discomfort. At any time during the study, if you should feel any discomfort while sharing your experiences, life events, etc. please remember that you are free to withdraw from this study at any time as well as request that any of your particular comments be taken out in the study report.

Benefits

If you decide to participate in this study, there will be no direct benefit to you. It is hoped that the information gained in this study will benefit adult ELL students advanced manufacturing programs.

Costs and Compensation

You will not have any costs and will not be compensated from participating in this study.

Participant Rights

Participating in this study is completely voluntary. You may choose not to take part in the study or to stop participating at any time, for any reason, without penalty or negative consequences. You can skip any questions that you do not wish to answer during the interviews.

Participants are at no point identified by their real name for this study. Instead, alias names are assigned to participants. Your choice to participate or not to participate in this study will have no impact on you as a student in any way.

If you have any questions *about the rights of research subjects or research-related injury*, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, Iowa State University, Ames, Iowa 50011.

Confidentiality

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, federal government regulatory agencies auditing departments of Iowa State University, and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy study records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by law, the following measures will be taken:

- All paper interview notes will be kept in locked filing cabinet in a locked home office
- All electronic notes will be stored on an Iowa State encrypted account, CyBox, and backed up on my encryption-protected personal computer.
- All participants, faculty, students, courses will be identified with an alias.
- All collected data will be retained until the project is complete and destroyed after that time.
- All results of this study will be shared in a group presentation format with research committee members, program faculty and administrators, as well as staff at your college.
- During the data collecting, recording, and sharing stage, all information containing names of people, places, etc. will be removed from the transcript and presentations.
- You will receive a copy of the interview transcripts and be given the opportunity to make changes to any of your interview answers.

We will take these steps to protect your confidentiality when results from this study are shared. However, it is possible that someone familiar with you or your experiences may be able to figure out who you are.

Questions

You are encouraged to ask questions at any time during this study. For further information ***about the study***, contact Ahmed Agyeman at aagyeman@iastate.edu or 515-360-2541. You can also contact my supervising faculty, Dr. Larry Ebberts, at lebberts@iastate.edu or 515-294-8067 with any questions or further information.

Consent and Authorization Provisions

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document, and that your questions have been satisfactorily answered. You will receive a copy of the written informed consent prior to your participation in the study.

Participant's Name (printed) _____

Participant's Signature _____ Date _____

APPENDIX D. STUDENT OBSERVATION CONSENT

Title of Study

Engagement Experiences: Adult English Language Learner Students in Advanced Manufacturing
at a Midwestern Community College

Investigator: **Ahmed K. Onwona-Agyeman**

This form describes a research project. It has information to help you decide whether or not you wish to participate. Research studies include only people who choose to take part—your participation is completely voluntary. Please discuss any questions you have about the study or about this form with the project staff before deciding to participate.

Introduction

The purpose of this study is to explore and gain an in-depth understanding of the day-to-day lived engagement experiences of adult ELL students enrolled in an advanced-manufacturing program at your community college. As part of this study, the researcher will visit and observe your class or lab. The purpose of this classroom or lab observation is to experience, first-hand the classroom or lab interaction between adult ELL students, their faculty, and peers.

Description of Procedures

If you agree to participate:

- There will be up to three observations that will last the entire class or lab periods.
- Observation will not be photographed, audio or video recorded.
- I will take notes about classroom interaction among students and faculty.
- I will not have interaction with students or faculty during the observation.
- No identifiers (student and faculty names, course title, class time, etc.) will be identified in my notes or final report.

For the observations, you will:

- Make your decision whether or not to participate in the observation without coercion, undue influence, or duress.
- Be allowed to decide not to participate in the observation or withdraw at any time without adversely affecting your relationship with the investigator(s).
- Be treated with dignity and respect at all times.
- Be given privacy and confidentiality.
- Maintain all your rights and privileges as a citizen.

- Be able to ask questions about the observation at any time before, during, and after participation in this observation.
- Be able to review copies of the observation notes

Risks or Discomforts

While participating in this study you are not expected to experience any risks or discomforts.

Benefits

If you decide to participate in this study, there will be no direct benefit to you. It is hoped that the information gained in this study will benefit adult ELL students in advanced manufacturing programs.

Costs and Compensation

You will not have any costs and will not be compensated from participating in this study.

Participant Rights

Participating in this study is completely voluntary. You may choose not to take part in the study or to stop participating at any time, for any reason, without penalty or negative consequences.

Participants are at no point identified by their real name for this study. Instead, alias names are assigned to participants. Your choice to participate or not to participate in this study will have no impact on you as a student in any way.

If you have any questions *about the rights of research subjects or research-related injury*, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, Iowa State University, Ames, Iowa 50011.

Confidentiality

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, federal government regulatory agencies auditing departments of Iowa State University, and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy study records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by law, the following measures will be taken:

- All observation notes will be kept in locked filing cabinet in a locked home office
- All electronic notes will be stored on an Iowa State encrypted account, CyBox, and backed up on my encryption-protected personal computer.
- All participants, faculty, students, courses will be identified with an alias
- All collected data will be retained until the project is complete and destroyed after that time
- All results of this study will be shared in a group presentation format with research committee members, program faculty and administrators, as well as staff at your college.
- During the data collecting, recording, and sharing stage, all information containing names of people, places, etc. will be removed from the transcript and presentations.

We will take these steps to protect your confidentiality when results from this study are shared. However, it is possible that someone familiar with you or your experiences may be able to figure out who you are.

Questions

You are encouraged to ask questions at any time during this study. For further information *about the study*, contact Ahmed Agyeman at aagyeman@iastate.edu or 515-360-2541. You can also contact my supervising faculty, Dr. Larry Ebberts, at lebberts@iastate.edu or 515-294-8067 with any questions or further information.

Consent and Authorization Provisions

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document, and that your questions have been satisfactorily answered. You will receive a copy of the written informed consent prior to your participation in the study.

Student's Name (printed) _____

Student's Signature

Date

APPENDIX E. PARTICIPANT INVITATION PHONE TRANSCRIPT

Researcher: Hello, my name is Ahmed Agyeman. I am pursuing my PhD at Iowa State University in Educational Leadership and Policy Studies, with emphases on Community College Leadership. I will like to speak to _____ is _____ available?

*If student is not available:

Researcher: Can you please ask _____ to call me? Again, my name is Ahmed Agyeman and my phone number is 515-360-2541.

If student is available:

Researcher: Thank you _____. My name is Ahmed Agyeman. I am pursuing my PhD at Iowa State University in Educational Leadership and Policy Studies, with emphases on Community College Leadership. I am completing a research study as part of my degree requirements and have chosen a study that involves ELL students enrolled in advance manufacturing programs here at your institution. Do you have about five minutes?

Researcher: _____, your Career Pathway Navigator, _____ identified you as a possible participant for this study. You do not have to be part of this study. This study is not part of your class and the decision to be part of it or not will not affect your grade or program completion. **I will need your permission to ask you two personal questions before proceeding. Your answers will determine if you qualify to be part of this study or not.**

To be part of this study, you have to be at least 25 years of age or over and enrolled in an advanced-manufacturing program at your college. Are you at least 25 years of age? Are you enrolled in an advanced-manufacturing program?

*If not at least 25 years of age and enrolled in advanced-manufacturing,

Researcher: _____, thank you very much for your time and good luck with your classes.

*If at least 25 years old and enrolled in an advanced-manufacturing program:

Researcher: I will like to schedule a time to meet with you so I can further explain the study as well as answer any questions. Are you available anytime or will you prefer to call me back with a time? I can be reached at 515-360-2541. Thank you so much for your time.

APPENDIX F. INTERVIEW PROTOCOL

FAMILY AND EDUCATIONAL BACKGROUND

1. Tell me about growing up
 - a. Can you tell me about yourself and your family?
 - b. Do you mind sharing your age?
 - c. Do you have any dependents? If yes, how many?
 - d. Can you tell me about you and your immediate family's educational background?
 - e. What was your highest level of education prior to enrolling in college?
 - f. Follow up: You mentioned that you had ____; could you tell me more about that? You mentioned when you were doing ____ happened. Could you give me a **specific** example of that?

COLLEGE ENROLLMENT EXPERIENCE

2. Thinking back to the decision to enroll in college, can you tell me any life events that prompted that decision?
 - a. Can you explain the feeling about the decision to enroll in college?
 - b. What did enrolling in college mean to you and your family; any other thoughts?
 - c. Describe the process you went through in making the decision
 - i. Who did you call?
 - ii. What factors did you consider, and why did you choose one path over another?
3. Describe your thoughts about the enquiry and enrollment process before you officially signed up for classes
 - a. First contact with college, application, advising, assessments, financial aid, course placement, etc.
 - b. What was that like for you?
 - c. You mentioned earlier that you _____. Could you describe in detail what happened?
 - d. Think of a time when you thought you were going to withdraw or became confident in continuing your college career and describe in as much detail as possible your feeling.

FACULTY INTERACTION AND PERCEPTION

4. Can you describe your experiences with your professor(s) since enrolling in the program?
 - a. What is your relationship with your professors?
 - b. In what ways have these experiences and relationships (if any) with your professor(s) affected your decisions in the program?
 - c. Have you visited with any professor this semester outside of class?
 - d. Was this face-to-face or email, and which was best for you?
 - e. Can you share any of the information or topics you often discussed with your professor(s) outside of class?
 - f. Any additional thoughts?
5. Do you see any challenges in interacting with professors?
6. If you were charged with being head of the department, what do you think needs to be done to make students' interaction experiences better?

PEER STUDENT INTERACTION AND PERCEPTION

7. Overall, what has been your interaction with your classmates in and outside the classroom?
 - a. Have your interactions been mainly as friends or for class work?
 - b. Have you found your interaction with your classmates helpful?
 - c. If not, why?
 - d. How can this experience be helpful to you?
8. Are you a member of any groups (clubs) on campus?
9. If yes,
 - a. Which groups?
 - b. How did you find out about it/them?
 - c. What are specific activities that you find helpful as a member?
10. If no,
 - a. Are you interested?
 - b. Are you aware of any groups (clubs) on campus?
 - c. Why are you not a member?
 - d. Are there any reasons why you have not joined any groups (clubs) in school?

STUDENT SUPPORT SERVICES INTERACTION AND PERCEPTION

11. Beside your professors and classmates, are there any other campus centers, offices, staff etc. that you have connected or engaged with often since starting school?
12. If yes, which offices?
 - a. How did you make that connection?
 - b. Why did you make the connection?
 - c. What has been your overall experience with these offices and centers?
 - d. Give examples when you thought you had a good experience or did not find the experience helpful.
13. If no, why have you not connected with any campus centers, offices, staff, etc.?

FOLLOW UP

14. Think back to the challenges we talked about in #3d. What could be done about those?
15. Think back to your comments about the life decisions that prompted your enrollment in college.
 - a. What are your thoughts about your future?
 - b. Can you share any benefits or concerns from enrolling in college?
16. Do you have any additional comments about your experiences on campus that we haven't already discussed?

APPENDIX G. FACULTY OBSERVATION CONSENT

Title of Study

Engagement Experiences: Adult English Language Learner Students in Advanced Manufacturing
at a Midwestern Community College

Investigator: Ahmed **K. Onwona-Agyeman**

This form describes a research project. It has information to help you decide whether or not you wish to participate. Research studies include only people who choose to take part—your participation is completely voluntary. Please discuss any questions you have about the study or about this form with the project staff before deciding to participate.

Introduction

The purpose of this study is to explore and gain an in-depth understanding of the day-to-day lived engagement experiences of adult ELL students enrolled in an advanced-manufacturing program at your community college. Your class has been chosen as part of this study for observation because you have adult ELL students enrolled in your class.

Description of Procedures

If you agree to participate:

- There will be one observation that will last the entire class or lab period.
- Observation will not be photographed, audio or video recorded.
- I will take notes about classroom interaction among students and faculty.
- I will not have interaction with students or faculty during the observation.
- No identifiers (student and faculty names, course title, class time, etc.) will be identified in my notes or final report.

For the observations, you will:

- Make your decision whether or not to participate in the observation without coercion, undue influence, or duress.
- Be allowed to decide not to participate in the observation or withdraw at any time without adversely affecting your relationship with the investigator(s).
- Be treated with dignity and respect at all times.
- Be given privacy and confidentiality.
- Maintain all your rights and privileges as a citizen.
- Be able to ask questions about the observation at any time before, during, and after participation in this observation.
- Be able to review copies of the observation notes

Risks or Discomforts

While participating in this study you are not expected to experience any risks or discomforts during observation.

Benefits

If you decide to participate in this study, there will be no direct benefit to you. It is hoped that the information gained in this study will benefit adult ELL students in advanced manufacturing programs.

Costs and Compensation

You will not have any costs and will not be compensated from participating in this study.

Participant Rights

Participating in this study is completely voluntary. You may choose not to take part in the study or to stop participating at any time, for any reason, without penalty or negative consequences.

Participants are at no point identified by their real name for this study. Instead, alias names are assigned to participants. Your choice to participate or not to participate in this study will have no impact on you as a faculty in any way.

If you have any questions *about the rights of research subjects or research-related injury*, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, Iowa State University, Ames, Iowa 50011.

Confidentiality

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, federal government regulatory agencies auditing departments of Iowa State University, and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy study records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by law, the following measures will be taken:

- All observation notes will be kept in locked filing cabinet in a locked home office
- All electronic notes will be stored on an Iowa State encrypted account, CyBox, and backed up on my encryption-protected personal computer.
- All participants, faculty, students, courses will be identified with an alias
- All collected data will be retained until the project is complete and destroyed after that time
- All results of this study will be shared in a group presentation format with research committee members, program faculty and administrators, as well as staff at your college.
- During the data collecting, recording, and sharing stage, all information containing names of people, places, etc. will be removed from the transcript and presentations.

We will take these steps to protect your confidentiality when results from this study are shared. However, it is possible that someone familiar with you or your experiences may be able to figure out who you are.

Questions

You are encouraged to ask questions at any time during this study. For further information *about the study*, contact Ahmed Agyeman at aagyeman@iastate.edu or 515-360-2541. You can also contact my supervising faculty, Dr. Larry Ebbers, at lebbers@iastate.edu or 515-294-8067 with any questions or further information.

Consent and Authorization Provisions

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document, and that your questions have been satisfactorily answered. You will receive a copy of the written informed consent prior to your participation in the study.

Faculty Name (printed) _____

Faculty Signature

Date

APPENDIX H. OBSERVATION PROTOCOL

Items to watch for	Detailed Descriptive Notes	Reflective and Analytic Notes
Social interaction in the classroom. (group, pairs, single work?)		
Body language of students; non-verbal communication		
What am I expecting to see? Did I?		
Classroom and lab activities Instructional resources		
Participants interaction compared to interviews		

General Comments:

Students' interaction and involvement with the instructor

Students' interaction and involvement with peers

Impact of my presence in the classroom

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