A PILOT STUDY OF MARKETABILITY AND JOB PLACEMENT OF
INTERDISCIPLINARY GERONTOLOGY GRADUATES, AT THE
UNDERGRADUATE LEVEL, IN SEMIRURAL AREAS OF NORTHERN
CALIFORNIA

A Project

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by

Elizabeth Margaret Near

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Abstract

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A PILOT STUDY OF MARKETABILITY AND JOB PLACEMENT OF INTERDISCIPLINARY GERONTOLOGY GRADUATES, AT THE UNDERGRADUATE LEVEL, IN SEMIRURAL AREAS OF NORTHERN CALIFORNIA

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The problem that this project seeks to examine is that of multidisciplinary placement and job viability for Gerontology graduates. With the growth of the aging population and the desire to adjust the market to the changing needs of the aging population, Gerontology graduates must separate themselves as marketable as an interdisciplinary graduate with multidisciplinary application in career and industry. The researcher utilized focus groups via chain-referral or snowball sampling methods of recruiting. The participants were required to be employed in the semirural Northern California region. Both quantitative demographic data and qualitative industry specific data were collected and analyzed to assess viability of a Gerontology graduate in multidisciplinary industries. Due to a lack of large participation and variability of participants, conclusions and recommendations drawn are not strong but provide good indication of results for future studies. The market appears to be growing and strong with anticipated growth as the demographics shift toward an aged society, industries are
educated on the value added benefits of hiring a Gerontology graduate, and Academia continues to grow Interdisciplinary Gerontology as a distinct discipline and field of study.

_______________________, Sponsor
Dr. Cheryl Osborne

_______________________
Date
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# TABLE OF CONTENTS

Acknowledgements .......................................................................................................................... vi

List of Tables .................................................................................................................................... x

Chapter

1. **INTRODUCTION** .................................................................................................................. 1
   - Statement of the problem .................................................................................................... 5
   - Definition of Terms ........................................................................................................ 7
   - Purpose of the Study .......................................................................................................... 10
   - Research Questions ........................................................................................................ 10
   - Theoretical Rationale ..................................................................................................... 12
   - Limitations ....................................................................................................................... 14
   - Assumptions ..................................................................................................................... 15
   - Human Subjects Consideration ..................................................................................... 15
   - Significance of the Study ............................................................................................... 15

2. **LITERATURE REVIEW** ......................................................................................................... 18
   - Introduction .................................................................................................................. 18
   - Theoretical Basis Review ............................................................................................. 20
   - Growth/Expansion in Academia .................................................................................... 22
   - Interdisciplinary Studies ............................................................................................... 27
Core Curriculum ........................................................................................................ 29
Current AGHE Programs .......................................................................................... 41
Age Profiles ............................................................................................................. 46
Gerontology Industry and Employment Profile ....................................................... 52

3. PROJECT OVERVIEW .......................................................................................... 62
   Introduction ........................................................................................................... 62
   Research Design ................................................................................................ 64
   Methods ............................................................................................................... 65
   Data Collection and Analysis ............................................................................ 70
   Summary ............................................................................................................. 72

4. PROJECT EVALUATION ANALYSIS .................................................................. 74
   Introduction ........................................................................................................ 74
   Data Summary ................................................................................................ 75
   Effectiveness/Ineffectiveness ........................................................................ 76
   Limitations ......................................................................................................... 81
   Conclusions and Recommendations for Practice ............................................ 82

Appendix A. Institutional Review Board Approval .................................................. 89
Appendix B. Focus Group Questions ....................................................................... 90
Appendix C. Demographic Data Sheet .................................................................. 91
Appendix D. Consent Form .................................................................................... 92
Appendix E. Market Analysis ............................................................................... 93
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Tables</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Estimated Current AGHE Associates and Bachelor program #’s in CA</td>
<td>45</td>
</tr>
<tr>
<td>2. Silver Industries</td>
<td>55</td>
</tr>
<tr>
<td>3. Recommended Career Paths for Sick and Well Sides of Aging</td>
<td>57</td>
</tr>
<tr>
<td>4. Recruited Industries and Careers</td>
<td>75</td>
</tr>
<tr>
<td>5. Demographics Data</td>
<td>76</td>
</tr>
<tr>
<td>6. Questions 2, 5 and 8 Comparison</td>
<td>78</td>
</tr>
<tr>
<td>7. Question 8: What additional disciplines would you pair with Gerontology?</td>
<td>86</td>
</tr>
</tbody>
</table>
Chapter 1

INTRODUCTION

Research in the field of gerontology has been growing since the late 1930’s. It was not until 1974 that the Association for Gerontology in Higher Education (AGHE) began as a separate organization to focus on the educational growth of the discipline (Association for Gerontology in Higher Education, 2008). In 1975, the University of Southern California (USC) started the Davis School of Gerontology. This was the first school of gerontology in the United States and is still the largest school of its type in the world (Riggs, 2012). Since then, the field of gerontology has grown significantly in undergraduate, graduate, and doctoral programs across the world. There are hundreds of programs offered within the realm of gerontological studies, from certificates and Associates degrees to minors, Bachelors, Masters, and Ph.Ds. With the growth of such programs and interest in the field, the viability and job market within this field comes into question. What jobs/industries/fields are these graduates gaining employment?

This study explores whether gerontology is/can be a viable degree choice in the Northern California semirural area by surveying local industries and companies about their knowledge and fit of a Gerontology graduate. With an interdisciplinary degree, are graduates able to find jobs not only in the field of Gerontology, but in multidisciplinary fields as well? There are several distinctions to make before moving forward, including defining critical terms and looking into the demographics of aging.

First, the distinction between multidisciplinary and interdisciplinary is critical in moving forward. “Although some people regard multidisciplinary [and] interdisciplinary
as the same (?)… there are distinct differences among the terms… The term multidisciplinary refers to knowledge that is drawn from diverse disciplines… The term interdisciplinary refers to analysis, synthesis, and harmonizing of ‘links between disciplines into a coordinated and coherent whole” (Fawcett, 2013, p. 376). If a curriculum is multidisciplinary, it combines two distinct disciplines as two distinct silos of knowledge where an interdisciplinary curriculum would focus on combining varying fields into one, synthesized, holistic model. Gerontology as an interdisciplinary program model contains coursework that looks at the aging process from a unique interdisciplinary perspective, focusing on a holistic model of aging including the physical, social, and psychological aspects of both the ill side and the well side of aging. A multidisciplinary degree program would combine two distinct disciplines, for example Gerontology and Business, or Gerontology and Social Work. Not only is this difference between interdisciplinary and multidisciplinary critical, the delineating of degree programs is also important.

Another distinction to make is the difference between degree programs, academic programs, and non-academic programs. Degree programs refer to courses of study that are leading toward an academic degree; an Associate’s degree, a Bachelor’s degree, a Master’s degree or a Doctorate degree. Academic programs refer to courses of study that hold academic credit but are taken as a part of, before, or after degree seeking coursework. This would include certificate programs, minor, and concentration programs. Non-academic programming refers to coursework intended only for the addition of knowledge in the field, perhaps for professional development, but does not have
academic credit associated with it. Non-academic programing is defined as “(Education) not related to, involved in, or trained in academic disciplines” (Farlex, 2015). These distinctions are elaborated on within the Literature Review.

The field of gerontology is commonly taught with a life span focus using research and data from the discipline of gerontology as well as other disciplines, thus generating a holistic, interdisciplinary degree with multidisciplinary application. These programs include undergraduate and graduate degree programs, academic programs, and non-academic programs, all of which fit under “gerontology programs”. This is where the distinction between the three general types of academic programs can cause confusion in reviewing the various specific programs. With the distinction between interdisciplinary and multidisciplinary as well as between degree programs, the demographics of aging both globally and locally are addressed.

The global demographics are and have been rapidly shifting in favor of the aging population. With the life span increase and the “senior tsunami” (Transgenerational Design, 2009) of Baby Boomers, the demographics of aging is worth pursuing on both a global, national, and local level. According to the Population Reference Bureau, of the 210 countries listed, 68 of their population is currently over 65. According to their mid-2013 population estimates, it is estimated that over 572 million or 8% of the global population is over 65 (Population Reference Bureau, 2013). An increased life expectancy and a growing aging population is a phenomenon that is experienced globally. Dychtwald (1999) speaks to the ‘battlefield’ of aging in the decades ahead as he compares the United States with Great Britain and Japan (Dychtwald, 1999). At that time, Japan was planning
for their aging population through their “Golden Plan” with long-term health care and models of longevity. Dychtwald referred to this “battlefield” as mostly a health challenge with the combination of longer life expectancy and an increase in the older adult population. Dychtwald speaks to the challenge that both businesses and individuals will face in caring for the age wave (Ruiz, 2006; Slon, 2012). Chambers (Chambers, et al., 2005) confirms the growth and shift in the United Kingdom. Lowenstein (2005) also affirms the global growth when looking at Israel; and discusses how the growth in their Gerontology degree programs and curriculum as a direct reflection of the aging population growth (Lowenstein, 2005).

Within the United States, there has been much more research and available data on the demographics of the aging population. 2011 was the start of the 76.4 million Baby Boomers turning 65. “By 2050, the percentage of US population over 65 will increase from 13% to 20 %” (Transgenerational Design, 2009). This wave is referred to as the “senior tsunami”. Not only is the aging population growing, the oldest old population (85+), currently made up of the Silent Generation cohort, is the fastest growing segment of the population with a growth rate of nearly 4% annually (Butler, 2008). It is important to note here that the oldest of the Baby Boom generation turns 69 in 2015, meaning that not all of the statistics of the Baby Boom cohort include the current aged population over 69, the Silent Generation cohort. This fact only increases the numbers of the aging population due to the lack of inclusion of the Silent Generation cohort (born 1925-1945).

California is no exception to this trend. As of the 2010 Census, 29.1% of California residents were over the age of 50 with 7.2% additional growth in the 45-49 age
range. This means that by the end of 2015, 36.3% of California residents will be over 50. This number is over 13.5 million individuals entering the ‘aging population’ (United State Census Bureau, 2010). When looking at semirural northern California, there is a greater percentage of ‘aging’ adults. Semirural is the term used in describing the selected region, specifically Placer County. Semirural defined is having characteristics of both rural and urban areas (Farlex, 2015). Placer County in Northern California has mid-sized cities but also has abundant open space areas. Placer county demographics Census data from 2010 places the over 50 population at 35.6% with an increase by the end of 2015 of 7.8%, bringing the total to 43.4% of the population over 50 (United State Census Bureau, 2010).

Statement of the problem

The hypothesized problem that this project seeks to examine is that of multidisciplinary placement and job viability for Gerontology graduates. With the growth of the aging population and the desire to adjust the market to the changing needs of the aging population, Gerontology graduates must distinguish or identify themselves as marketable as an interdisciplinary graduate with multidisciplinary application in career and industry.

When examining the existence of current interdisciplinary and multidisciplinary Gerontology programs at multiple levels of academia across the globe, along with the knowledge of growth in the aging population through the world, two outcomes are expected. First, that Gerontology programs are adapting to a growing, diverse aging population and second, that Gerontology graduates, specifically at the undergraduate
level, are able to get jobs in multidisciplinary fields. There is an interest in any Gerontology graduate or student’s success in job placement within a multidisciplinary field however, for the purposes of this study, the focus is on graduates with a Bachelor’s degree. Much of the research is applicable to any level of degree or academic programming, but the problem and research is intentionally limited to the application and job placement of interdisciplinary graduates with Gerontology undergraduate degrees.

The first expectation of growing Gerontology programs is addressed in the literature review and the second expectation on the marketability of Gerontology graduates is the focus of the research. Based on the demographic shift of current elders from the Silent Generation and Baby Boomer cohorts entering old age and the growth of Gerontology programs throughout academia, one would expect to see a plentiful supply of jobs for an undergraduate gerontology major.

As the market, industries, and companies are evaluated, knowledge of demographics applied, and interdisciplinary undergraduate Gerontology majors graduate, the growth and industry available to such individuals could be vast. This study seeks to see if this is the case. If this is not the case, why, and how can such individual seek to become more attractive in the marketplace? How does the application of an interdisciplinary Gerontology degree allow for job and industry development in any multidisciplinary field?

Additionally, there is a growing need in the workforce across all disciplines to have employees meet the needs of the aging market. How do interdisciplinary graduates promote themselves in multidisciplinary industries as productive employees? These
employees will need to possess “(1) expertise in working with older persons, (2) skills to increase research with age related issues and health, and (3) knowledge to develop and implement policies that apply to our aging society” (Standards and Guidelines Committee of the Association for Gerontology in Higher Education, 2008). The Job Market Signaling Method of economics addresses how Gerontology graduates can achieve placement in multiple fields by making themselves more attractive to their potential employer. Perhaps, part of the answer also lies in adapting current industries to meet the needs of the aging population. It is critical before moving toward the literature review, to define terms.

Definition of Terms

Terms and definitions vary between facets of academia and professionals and can create challenges for interpretation and application. A glossary was developed in order to create a common nomenclature moving forward.

*Ageism* refers to any form of discrimination, prejudice or bias on the basis of age (Davies, 2008)

*Aging* population refers to those over 65 (Department of Health & Human Services, 2014).


*Certificate* in Gerontology is a document attesting to the fact that a person has completed a program of instruction and educational experiences in the field of
gerontology at the undergraduate or graduate level. Usually but not necessarily in connection with a non-gerontological degree program. A certificate is not a degree program but can be an academic program on its own (Standards and Guidelines Committee of the Association for Gerontology in Higher Education, 2008). It is critical to note here that certificates can often be granted for a one-day vocational course or continuing education. For the purposes of this study, certificates do not include these types of programs.

*Cohort* defined is a group of people used in a study who have something, such as age or social class in common. (Merriam-Webster, 2014)

*Concentration* in Gerontology is defined as a set of college or university-level courses and other educational experiences oriented exclusively or in large part toward gerontology. A concentration is an academic program but is not a degree program in and of itself. (Standards and Guidelines Committee [A subcommittee of the Academic Program Development Committee] of the Association for Gerontology in Higher Education, 2008)

*Gerontology* is hereafter defined as the multidisciplinary and interdisciplinary study of aging across the lifespan. The study of individuals as they grow from midlife through later life including the study of physical, mental and social changes; the investigation of the changes in society resulting from our aging population; the application of this knowledge to policies, programs, and practice. (Association for Gerontology in Higher Education, 2015; Riggs, 2012; Mangan, 2011).
Gerontologists improve the quality of life and promote the well-being of persons as they age within their families, communities, and societies through research, education, and application of interdisciplinary knowledge of the aging process and aging populations (Association for Gerontology in Higher Education, 2014).

Interdisciplinary refers to analysis, synthesis, and harmonizing of ‘links between disciplines into a coordinated and coherent whole’’ (Fawcett, 2013). Interdisciplinary studies are applied within one discipline.

Middle Old refers to those between 75-84 years (Transgenerational Design, 2009)

Minor in Gerontology is an abbreviated or supplementary but educationally coherent and recognized program of instruction in gerontology pursued by a student seeking a degree in a major or principle area other than gerontology. A minor is not a degree program, but is used in conjunction with a degree program and is an academic program. (Standards and Guidelines Committee [A subcommittee of the Academic Program Development Committee] of the Association for Gerontology in Higher Education, 2008)

Multidisciplinary refers to knowledge that is drawn from diverse (more than one) disciplines (Fawcett, 2013)

Non Academic is not related to, involved in, or trained in academic disciplines (Farlex, 2015).

Oldest Old refers to those individuals over 85 years (Transgenerational Design, 2009)
Signals/Signaling refers to things that one does that are visible and that are in part designed to communicate. They are alterable attributes that a potential employee uses to communicate productivity to a potential employer in order to make themselves more marketable. (Spence, 2001).

Silent Generation refers to those born from 1925-1945

Young Old refers to those between ages 65-74 (Transgenerational Design, 2009)

Purpose of the Study

The purpose of this study is to determine if there is a viable job market for an interdisciplinary undergraduate degree in gerontology, specifically in semirural Northern California. Many Gerontology undergraduates are able to find jobs within the field of Gerontology, working for a company within the industry. This study researches the multidisciplinary job market, seeking to find marketability for the interdisciplinary graduate to apply the degree in various fashions. This study seeks to answer the following questions.

Research Questions

The main research question is:

1. As interdisciplinary gerontology graduates seek employment in varying fields of study, are there companies, industries, or individuals who are looking for a specific skill set to meet the needs of the growing aging population?

This main question has two variables that correlate to the basic economic model of supply and demand. First, the supply of interdisciplinary undergraduate
Gerontology graduates and second, the demand for knowledgeable, skilled employees in the existing markets.

1. What is the supply of Gerontology Graduates?
   a. What are ways that gerontology majors can blend ‘standard’ industries with an interdisciplinary academic background in gerontological studies?
   b. If a student paired gerontology with another discipline, creating a multidisciplinary undergraduate degree, does his/her Bachelor’s degree become more marketable?
   c. How can an undergraduate Gerontology graduate seek to become more attractive in the marketplace?

2. What is the demand in the industry for Gerontology graduates?
   a. Is there a supply of jobs for an undergraduate gerontology major?
   b. How are the changing physical, emotional, physiological needs of the aging population addressed and met without lifestyle, quality, or situation changes?
   c. Are mainstream industries adapting their hiring, training, or marketing strategies to better suit the age wave?
   d. How does the application of an interdisciplinary Gerontology degree allow for job and industry development in any multidisciplinary field?

Just like a true economic model, the supply and demand are dependent and shifting, based on one another. This study addresses the supply questions within the literature review, analyzing the current Gerontology program growth as well as with the
theoretical rationale in dealing with individual placement and job market viability for graduates. The demand questions answered in the research, data collection, analyzing, and recommendations. This study limits itself by specifically addressing the supply within California only and addressing the demand with a limited sample in semirural northern California.

Theoretical Rationale

Based on the demographic shifts, there should be growth around the globe in the field of gerontology but as Job Market Signaling Theory proposes (Spence, 1973), graduates in the field of gerontology may need to engage in ‘signaling’ potential employers in order to promote their value in an organization. This study looks not only at the theory of Job Market Signaling as an economic model for employment, but specifically looks at the idea of job market signaling in regard to undergraduate graduates in the interdisciplinary and multidisciplinary field of gerontology as the industry grows.

Michael Spence, American Economist and Nobel Peace Prize Winner, published his Job Market Signaling Model in 1972 as part of his PhD dissertation titled, Market signaling: the informational structure of job markets and related phenomena. The Job Market Signaling Model is an economic model that is essentially a process that matches workers with employers, closing any gap between supply and demand. The theory elaborates on this matching process whereby the potential employee communicates ‘signals’ of productivity in order to make themselves a more valuable potential employee based on the job market and productivity equilibrium of the individual employers. Typically, the ‘signal’ is education (Spence, 2001).
In Spence’s (1973) model, academic credentials provide information employers use in their estimation of productivity. Education credentials serve as a signal of underlying abilities, talents, and motivation. The lack of academic credentials acts as a signal to screen out workers without those attributes. More educated workers earn more because their education has signaled their high ability (Wolla, 2014).

Spence’s theory states that the opportunity cost of signals (education) are higher for employees that are more productive and therefore can be an indication of a more productive employee. “Signaling occurs when potential employees convey information about their productivity to employers through academic credentials” (Wolla, 2014, p. 91). A productive employee pursues signals that will create distinction between other potential employees and although a non-productive employee could also purchase the same signals, the opportunity cost is lost because there is a lack of true investment into productivity. Spence also identifies that there are observable factors that a potential employer, based on previous experience, can look for when going into the job market looking for employees.

Based on the current marketplace, the employer interprets the signals for potential productivity of the interviewee. Signals refer to things that one does that are visible and that communicate potential productivity. They are alterable attributes that a potential employee uses to communicate productivity. A Signaling equilibrium is a set of components in the employers’ cycle that prove true repeatedly, “employer beliefs that are self-confirming” (Spence, 1973). Spence discusses the creation of a signaling equilibrium based on the signals given by each employee and the current marketplace data, whereby
“firms belief(ve) that an educated worker is more productive and so pay a premium to such a worker” (Swinkels, 1999, p. 949).

As an interdisciplinary gerontology graduate, there is educational productivity that has the potential for application in various multidisciplinary industries. Not only will a gerontology graduate need to participate in signaling, there may be additional opportunity costs, or signals necessary to communicate potential productivity. A gerontology graduate would need to signal the interdisciplinary skills and expertise in varying applications of the degree. For example, a gerontology graduate seeking to get a job at a fitness club may look just as potentially productive to the employer as a graduate in another field may, but the added knowledge of the physical aspects of aging can be applied toward greater productivity depending on the average age of the clientele. A gerontology graduate needs to be aware of and practice ‘signaling’ potential productivity in multidisciplinary fields based on the holistic, interdisciplinary nature of the gerontology degree.

Spence’s (1973) theory of Job Market Signaling applies to any graduate in any degree but the potential void of multidisciplinary and interdisciplinary gerontology applicable industries/jobs, would require the use of this theory in order to successfully tie the interdisciplinary Gerontology degree earned to multidisciplinary fields.

Limitations

The study is limited to data collected and applied in semirural Northern California, specifically the Sacramento/Placer county region. This project also limits itself by only looking at undergraduate Bachelor degree programs due to the increased
consistency in curriculum and programming than in academic certificate or non-academic programs.

Assumptions

This study assumes that the results apply to industry and education within semirural Northern California. This study additionally assumes, despite the demographics, that there is limited job market in multidisciplinary fields, specifically looking for a Gerontology graduate. This study assumes in summary that the supply of gerontology graduates in semirural Northern California outweighs the demand for jobs in the field of Gerontology and looks toward multidisciplinary fields.

Human Subjects Consideration

The Committee for the Protection of Human Subjects/IRB at California State University Sacramento (Appendix A) approved this study. The study is ‘exempt’ as it relates to test, surveys, interviews, or public observation per Exemption 45 CFR 46.101(b) (2). (US Department of Health and Human Services, 2004).

Significance of Study

As the population of California continues to age, it becomes necessary for individuals and organizations to shift their marketing and product placement to the aging population. The issue lies in the recognition and adjustment toward this trend. This study is significant as it seeks to shed light on whether varying industries have recognized and/or shifted toward this population. Findings from this study provide both industry leaders, companies, and employers, the awareness of marketable employees, trained in this adaption to the aging trend. This could create competitive advantage to such
employers as the recognition of an employee base with an interdisciplinary skill set toward the aging population could greatly affect the target market and eventually bottom line of an employer’s profit.

For Gerontology graduates or students, this study provides direct insight into the job market and potential industries of application of skills with an interdisciplinary Gerontology degree. It also provides a recommended current set of skills necessary for the marketplace. This study is specifically applicable to rural Northern California, but the principles and research questions could be applied in many locations to determine job viability and the tools necessary to market an interdisciplinary Gerontology degree. As interdisciplinary gerontology graduates seek employment in either Gerontology or other fields of study, are there companies, employers, or individuals who are looking for a specific skill set to meet the needs of the aging population/target market? If so, what fields are they? If not, how does a gerontology graduate market themselves as employable to potential employers?

Chapter two presents a discussion of literature reviewed that is relevant to the project from both the historical and educational perspective of Gerontology as a field of study. Chapter two opens by addressing theoretical basis review and then goes into reviewing the two major themes of the supply of Gerontology graduates and the demand of jobs/market readiness. Many subtopics are addressed under these two broader topics including growth/expansion in academia, interdisciplinary studies and core curriculum as well as aging profiles of the Silent and Baby Boomer Generations. Chapter three consists of a project overview and discusses the use of focus groups as the means of data
collection. It includes details regarding the methodology used in designing and collecting the data needed for the project and concludes with an outline of the project itself, the job market analysis. Chapter four describes analysis of the research data and creates an evaluation of the project including recommendations, limitations, and conclusion on the effectiveness of the study. The project concludes with a copy of the project itself, a market analysis and recommendation of the job market for an undergraduate interdisciplinary gerontology graduate.
Chapter 2

LITERATURE REVIEW

Introduction

As the life span continues to extend and demographics shift toward an aged society, there is growth in the field of gerontology. Gerontology is a distinct field of study that has been expanding over the recent years and is expected to reach its apex as the Baby Boom Generation reaches older adulthood, and joins the existing Silent generation cohort. The Baby Boom Generation are those born between 1946 and 1964 and currently (in 2015) range in age from 51 to 69. The Silent Generation cohort includes those individuals born between 1925 and 1945, and currently range in age from 70 to 90. It is noted that demographic data cited is from 2010 and even though it is the most recent published data, the numbers may not be entirely accurate due to the time elapsed since publication. Universities across the world are responding to this shift and creating varying interdisciplinary degree programs and academic programs in order to meet the needs of the aging population. This project seeks to ascertain whether a graduate from such a degree program would be employable as an interdisciplinary graduate, in multidisciplinary fields. The questions asked are as simple as supply (Gerontology graduates) and demand (jobs). This project only looks at undergraduate Bachelor degree programs, as there is more consistency in degree programs than is typically seen in other degree programs, academic certificate or non-academic programs. The literature review discusses theory, themes and background information concerning the job placement and marketability of such graduate. The research done is general in part; however, the
application is specific to individuals in semirural northern California. The literature review begins with a discussion of theoretical basis review, allowing for a foundation or lens from which to view the remainder of the literature. The remainder of the literature review addressed the two major themes mentioned previously: the supply of Gerontology graduates and the demand, or job market. The focus of this chapter addresses these two broad themes with certain specifics. In relation to the supply of Gerontology graduates, growth/expansion in Academia is addressed including a discussion of core curriculum and varying levels of degree, academic, and interdisciplinary programs. In regard to the demand within Gerontology of jobs, market and industry, aging profiles of the Silent and Baby Boomer Generations is discussed along with a Gerontology industry and employment profile. The entirety of the literature review and the delineation between supply and demand seeks to answer the main hypothesis: As interdisciplinary gerontology graduates seek employment in varying fields of study, are there companies, industries, or individuals who are looking for a specific skill set to meet the needs of the growing aging population? If so, what fields are they? If not, how does a gerontology graduate market themselves as employable to potential employers?

It is critical to note that much of the literature reviewed is descriptive or evaluative in nature. Very little research using quantitative data specifically in the field of Gerontology as it relates to Higher Education is included. Much of the literature and research reviewed deals with status of Gerontology in Higher Education along with how the current state was achieved. The argument can be made, however, that the literature
and data used, sufficiently support the ideas presented, despite being mostly descriptive in nature.

Theoretical Basis Review

Despite the fact that a Gerontology graduate may have the degree and the fact that there may be need in the industry, there can exist a gap between the recognition of the need and the ability of the graduate to clearly articulate the ability to fill the specific need. As discussed in chapter one, The Job Market Signaling Model by Michael Spence is applied to close the gap between supply, demand, and opportunity.

The Job Market Signaling Model is an economic model whereby the potential employee communicates ‘signals’ of productivity in order to make themselves a more valuable potential employee. Based on the current marketplace, the employer interprets the signals to potential productivity of the interviewee. Spence discusses the creation of a signaling equilibrium based on the signals and the current marketplace data, whereby “firms belief(ve) that an educated worker is more productive and so pay a premium to such a worker” (Swinkels, 1999).

Spence speaks to how further education or in this case, specific education, could change/create a different signal to make the graduate more appealing to the employer. Within the framework of the theory of Job Market Signaling, specific education makes a graduate more employable or productive to the employer (Spence, 2001). This theory can be applied to allow an interdisciplinary gerontology graduate to market himself/herself in a unique and effective method. By implementing a ‘signal’, an interdisciplinary gerontology graduate conveys a need in a company that only that graduate is qualified to
fill, based on education. By recognizing and filling a need in an industry or organization, the potential employee gives the employer more information concerning the skill set and target market of the position, further shifting the signaling equilibrium toward the inclusion of gerontological studies/knowledge.

DeFranco and Zhou (2009) tested the job market signaling theory by reviewing the productivity of analysts with a Chartered Financial Analyst (CFA) designation. DeFranco and Zhou collected 4,380 analyst broker names over the course of 4 years. 1,017 were CFA chartered and 3,363 were not. The comparison was of the timeliness of their forecasts and the results showed an increase in timeliness for the brokers with a charter as well as a stronger market reaction to those who were ‘credentialed’, using credentials as a form of signaling. Since the innate ability or productivity of these individuals could be seen beforehand, the employers interpreted the CFA charter as a marker of increased ability. Although this study does not relate specifically to Gerontology, it speaks to specified education as a means of signaling innate ability or productivity to an industry or potential employer.

Wolla (2014) conducted a study in order to test and apply this model as an active learning method for the Federal Reserve Bank in St. Louis. The study separated the class into employees and employers and consisted of two rounds, one with no productivity signal and the second with a productivity signal. The students were to negotiate pay within a certain range and then calculate profitability based on the hidden productivity of each employee. In the second round, each employee had an education signal that communicated productivity to the employers. The result was not only an increase in the
learning and retention of the ideas presented, but also an increase in negotiated pay for the more productive employees as well as an increase in the employers profitability due to the known productivity based on the signaling. Wolla’s study is a very simplified version of the theory but is a great example of the effect of implementing signaling.

Job Market Signaling (Spence, 1973) has been implemented in multiple industries and settings and is tested as mentioned above. Further studies have yet to be done on the success of implementing such a method specifically in the field of Gerontology.

Job Market Signaling creates the verbiage of ‘signals’ and allows a gerontology graduate to identify and market the specific interdisciplinary skill sets to potential multidisciplinary employers. This theory closes the gap between supply and demand, potentially opening opportunities for graduates and employers that would otherwise not exist. With the lens of job market signaling and its value to the relationship between supply and demand, the supply of Gerontology graduates is examined in Academia.

Growth/Expansion in Academia

As seen in chapter one, there has been a great shift in the demographics of aging throughout the world. Academia has responded to this demographic shift both globally and nationally. Gerontology programs throughout the nation are responding to the aging population with diversity of programs, expanding their curriculum and looking into varying aspects of aging, specifically including the Baby Boom, and Silent Generation populations (Mangan, 2011) (Roberts, 2009). The response from academia deals with global shifts, national shifts, and interdisciplinary program shifts.
Globally, the field of gerontology is growing into a distinct academic discipline. Europe has addressed the growth of Gerontology programs by streamlining their curriculum and programming into the European Master Gerontology (EUMAG) (Meyer, 2003). This Master’s program is a two-year program where the first year consists of five core modules, which include foundational gerontological studies such as physio, social, and health. The second year allows students to choose a ‘track’ that relates to their specific field of study. Some examples include Professional Studies, Administration, and Research. Every student comes back in the last four months of the program to complete a dissertation. The student will be vocationally prepared to enter their field of study. This program was adapted by many Universities in multiple countries throughout Europe and allow a student to travel to another campus to complete certain parts of the degree program.

Additionally, Lowenstein (2005) addresses the discipline in Israel and speaks to how they are responding to the rapid growth and challenges of an aging population. Lowenstein outlines the creation and development of a Master of Gerontology program at University of Haifa Israel. The program was crafted based on three factors: need, recognition of the need and acting on the need. The program had three goals as well, to create an interdisciplinary program, to upgrade the level of professionals, and to create integration between research and practice. The program was created and successfully accomplished its goals. Lowenstein (2005) summarizes as follows:

For any program, and especially a new department, evaluation and feedback are constantly necessary, prompting questions about the multidisciplinary versus the
interdisciplinary of the curriculum. Today, the multiple and complex needs of the elderly population are understood to require interdisciplinary collaboration, and programs and learning experiences must be developed to facilitate a better understanding of the various roles and expertise required (Deveau, Blumberg, & Joshi, 1997). The master’s department is geared toward such interdisciplinary education (p. 260).

Just as these international programs have altered and shifted programming and curriculum based on the environment and demographic shift, the United States has also been developing and/or modifying current academic status.

National

Universities throughout the United States have responded to the shift in demographics as well (Clark, 2002). At the University of Rhode Island, the Rhode Island Geriatric Education Center created an interdisciplinary team-training institute to bring together a more holistic view of the changing demographics and need for interdisciplinary education on the topic. Clark (2002) recognized and mentioned the need for growth in education and service training in order to meet the needs and demands unique to this shift in the aging population. “The need for such programs is especially acute in gerontology and geriatrics, where the rapidly expanding numbers of older adults promises to place growing pressures on health care and human services systems unprepared to meet the special, multifaceted needs of this population” (p. 512). Some of the recommendations of the team-training institute included combining theory and practice as well as implementing more extensive research and marketing on a target
audience. The idea of an interdisciplinary team training did a great job of creating the framework for collaboration among multiple disciplines included (social work, nursing, psychology, and others) from a gerontological viewpoint. The demographic shifts can be viewed as a whole in the case of the University of Rhode Island, or in more specific demographics, as at the Marylhurst University, Oregon.

Marylhurst University in Oregon has a gerontology curriculum that looks at the aging population as shaped by gender, class, and ethnicity (Sasser, 2005). The curriculum includes a holistic perspective on aging but a significant section is devoted to the cultural aspects of aging, include gender, class, and ethnicity on both a national and global scale. Some of their core courses included “Multi-disciplinary Perspectives on Aging; Embodiment in Later Life; Psychological Aspects of aging….and Gerontology: Synthesis in Action” (Sasser, 2005). Implementing the core curriculum not only helped the university achieve the goal of an interdisciplinary, holistic program, but it allowed for the university to clearly address and achieve its program-level learning outcomes which were geared toward preparing students to be aware of the societal, cultural, political, and economic issues and changes facing the field of gerontology. The program also allowed for professional development opportunities including internships, focus groups, and interviews.

Dosen (2009) at DePaul University discusses the growth and development of programs in general in response to culture and society, stating a “demand for individuals knowledgeable in these skills” (p. 362). His work at DePaul, is on the growth and development of Catholic Studies in Higher Education, however the principles and
conclusions drawn parallel the development of Gerontological curriculum. The historical context points to an education system whereby students want an education that is practically applicable to current life and times, not merely a traditional curriculum. Dosen correlates the culturally driven coursework to a more interdisciplinary program that once popular, can often become its own academic field. The growth pattern seen in DePaul University closely mirrors that of the gerontological field, especially when pairing with the demographic shift. It can be easy to create such academic fields in a silo and forget to imperative of the holistic or interdisciplinary curriculum.

The School of Social Work at Adelphi University in New York (Fenster, Zodikoff, Rozario, & Joyce, 2010) conducted a research study comparing students’ knowledge in a gerontology-infused class versus the same class without gerontology knowledge infused in. The gerontology curriculum was infused into the current social work curriculum, allowing interdisciplinary knowledge to be gained. The test students with the gerontology-infused courses had a more extensive knowledge of age-related topics and performed higher on the pre and posttests than their counterparts. Fenster reiterates this infusion of gerontology coursework as a response to the needs of society as presented by the aging demographics. Not only are universities in the US responding to the shift in demographics, there is a shift in the education medium in many cases.

As programs are merging study with application, theory with practice, and in-class learning with online and study abroad programs, two examples stand out. First, The University of Maryland: Baltimore has created a multimedia course titled “So You Say You Want a Revolution: How Boomers Are Revolutionizing Aging”. The course seeks to
educate and encourage the knowledge and application of gerontology, especially in the creation of jobs (Mangan, 2011). The University of Maryland: Baltimore has seen great growth in its Aging programs with the creative expansion of programming. Second, the University of Southern California offered a summer study abroad program to Genoa, Italy to study the health effects of the Mediterranean diet and the genetics of aging (Mangan, 2011). Both of these non-traditional mediums are helping the academic reputation of Gerontology become both interdisciplinary and attractive in theory and practice.

Interdisciplinary Studies

As Gerontology programs grow in number and variation, other programs are absorbing gerontological material as a part of their coursework, becoming more interdisciplinary in nature. The Association for Gerontology in Higher Education (AGHE) has built each curriculum with an interdisciplinary, holistic mindset. Interdisciplinary refers to analysis, synthesis, and harmonizing of “links between disciplines into a coordinated and coherent whole” (Fawcett, 2013). Interdisciplinary studies are generally applied within one discipline. Multidisciplinary, on the other hand, refers to knowledge that is drawn from diverse (more than one) disciplines (Fawcett, 2013). If a curriculum is multidisciplinary, it combines two distinct disciplines as two distinct silos of knowledge where an interdisciplinary curriculum would focus on combining varying fields into one, synthesized, holistic model. Gerontology as an interdisciplinary program model contains coursework that looks at the aging process from a unique interdisciplinary perspective, focusing on a holistic model of aging including the
physical, social, and psychological aspects of the ill side as well as the well side of aging. The growth of Gerontology programs both globally and nationally are also trending toward interdisciplinary programming and curriculum.

Global

Moore (2003), in his study of Higher Education in South Africa also argues that curriculum needs to be responsive to the needs of the community “responding to social, cultural, political, and economic changes in environment” (p. 304). The result for Moore’s research proved to be a team of professionals from various departments coming together to create a holistic view of the field of study. Moore concludes that an interdisciplinary curriculum is imperative in creating and sustaining curriculum reform and programming.

The University of Central Lancaster, UK used multidisciplinary focus groups to create an interdisciplinary foundational degree in health and social care. Chambers discusses how a foundation degree, similar to a Bachelor’s Degree could open up career pathways that would have been almost impossible before (Chambers, et al., 2005) as the formulation of the degree is based on interdisciplinary research and application. The multidisciplinary committee who consulted on this project “found this aspect (interdisciplinary consultation) of the consultation extremely useful, both for the design of the curriculum but also for their own understanding of others’ roles” (Chambers, et al., p. 248).
In the book “The Handbook of Geriatric Care Management”, Cress (2007) speaks to the academic programs for gerontology currently in existence. Cress confirms the thought that education and programming is a response to consumer need and is very reactive in nature. Cress supports the idea of teaching Gerontology as an interdisciplinary study, not as a ‘silo’ type program in and of itself. Cress also promotes teaching Gerontology with uniformity and consistency across America, which aligns with the Association for Gerontology in Higher Education (AGHE) and their core curriculum for gerontology programs.

As the growth and shifting of interdisciplinary Gerontology programs and curriculum have been seen on both a global and national level, the question becomes, what is the mechanism for growth? How is growth governed? In this case, the growth of Gerontology as a discipline has exploded around the world but what, if anything is in place to govern the growth.

Core Curriculum

The Association for Gerontology in Higher Education (AGHE) is “a membership organization of colleges and universities that offer education, training, and research programs in the field of aging. Their purpose is to foster the commitment of higher education to the field of aging through education, research, and public service” (Association for Gerontology in Higher Education, 2008, p. About Us para.1). AGHE has done an excellent job of providing some continuity in the academic field of gerontology. They have created, starting in 1978, a curriculum core for all types of gerontology
programs. The curriculum core is revised periodically and has been amended just last year (2014) for currency to address the changes in the workforce. This curriculum core is interdisciplinary in nature and includes courses on varying topics related to aging with the goal of effectively educating and advancing gerontology education in academic institutions (Association for Gerontology in Higher Education, 2008).

Inherent in the growth of interdisciplinary degree programs, is a shift toward streamlined programming. Some of these gerontology programs vary from one or two courses on gerontology infused into the curriculum to a holistic synthesis drawn from multiple fields to create the gerontology curriculum. The Association for Gerontology in Higher Education (AGHE) has created a tool for governing and making consistent the growth of the Gerontology degree across the globe. The AGHE outlines a core curriculum for all levels and types of degree programs in the Standards and Guidelines for Gerontology and Geriatrics Programs. They recently updated the standard by finalizing the Core Competencies (Association for Gerontology in Higher Education, 2014) by which every program will be measured in order to maintain success and consistency across degree programs. These Core Competencies build upon the earlier published curriculum and address the foundational, interactional, and contextual competencies for a gerontology graduate.

AGHE’s core curriculum ‘trends in gerontological education’, moving from a general Gerontology degree program to more specialized fields within Gerontology (Standards and Guidelines Committee of the Association for Gerontology in Higher Education, 2008). The implementation of AGHE’s core curriculum is growing globally
and there is research, which confirms the trend of a core curriculum on both a global and national level.

In discussing the creation of interdisciplinary gerontology programs in Israel, Lowenstien (2005) supports the idea of a core curriculum. She concludes, “There is a consensus...over the existence of a core body of knowledge...prompts the development of distinctive curricula with an interdisciplinary thrust” (p. 260). Lowenstein’s goal is to provide common language and ease of communication among professionals whether they are gerontologists or not.

The Adelphi University School of Social Work in Garden City, New York, implemented a core curriculum by adjusting their program to be gerontology-infused. The school implemented an interdisciplinary group of individuals in the curriculum infusion and saw positive results in the social work students’ knowledge of the aging population. Fenster ET all (2010) states, “the curricular innovation improved students’ gerontology knowledge. Furthermore, students in the gero-infused classes felt more strongly than those in the non-gero-infused classes that they had learned about working with older adults in these specific settings” (p. 649).

In addressing the continuity of the growth in academia, the Association for Gerontology in Higher Education (AGHE), has created a core curriculum for all participating academic institutions beginning as early as 1976. The core curriculum and competencies are adapted and updated for academic program levels and were updated by AGHE as recently as February 2015. It is important to note again the distinction between degree programs, academic programs, and non-academic programs. Degree programs
refer to courses of study that are leading toward an academic degree; an Associate’s degree, a Bachelor’s degree, a Master’s degree or a Doctorate degree. These are discussed in the following pages along with a current analysis of Bachelors and Associates gerontology degrees being offered in California. Academic programs refer to courses of study that have academic credit can be taken as a part of, before, or after degree seeking coursework. This would include certificate programs, minor, and concentration programs which are discussed in detail. The role of interdisciplinary studies as it relates to gerontology growth is also discussed.

An additional note is that programs, which subscribe to the Association for Gerontology in Hire Education’s core curriculum, include both the ill and well side of aging. A truly interdisciplinary, holistic study of age must include studying not only the ill side of aging including common injuries, diseases, disorders, and treatments, but also the well side of aging and the strengths associated with wellness as an individual ages.

AGHE’s core curriculum includes chapters on varied levels of higher education. The core curriculum exists with an interdisciplinary mindset as it includes a comprehensive study of aging. The core curriculum does allow for varying, potentially multidisciplinary areas of study to be learned with the goal of exceptional employability for graduates of such programs. Some of the core courses include the sociology or social aspects of aging, the psychology or mental health aspects of aging, the biology/physiology/health aspects of aging, research methods, and an internship (Standards and Guidelines Committee of the Association for Gerontology in Higher Education, 2008). Each level of programming is looked at individually, divided into two
groups, degree programs and academic programs. As mentioned earlier, degree programs refer specifically to courses of study that are leading toward an academic degree; an Associate’s either degree, a Bachelor’s degree, a Master’s degree or a Doctorate degree.

AGHE’s Core Curriculum begins with the Associates Degree Programs in Gerontology. Associates degrees are generally two-year degree programs, usually comprising of 60 credit unit hours and can take three forms, the Associate of Arts (AA), Associate of Science (AS), and Associate of Applied Science (AAS) (Association for Gerontology in Higher Education, 2008, pp. 18-23). An Associate’s degree is usually applied toward an individual’s transcript. The Gerontology curriculum requirements for an Associate’s degree include coursework on the sociology of aging, psychology of aging, biology of aging, and health and human services with an emphasis on aging. These four courses create a core Gerontology requirement of 12 units. There is an added six units of gerontology electives that are added to the Associates degree as well as six units of practicum or field placement. The elective courses should contain at minimum 50% gerontology content. The practicum should have minimum 200 hours completed along with an in-class discussion and application with other students to complete (p. 20). That encompasses the entirety of the Gerontology requirements for the Associates degree program, 24 units in all. The remaining 36 units will be additional required General Education courses and electives per the community college’s current catalogue. This concludes the core curriculum outline for Associates programs and moves toward Bachelor’s degree programs.
A Bachelor’s Degree takes the form of either a Bachelor of Arts or a Bachelor of Science Degree as offered by a four-year university. The AGHE describes the forty-one Bachelor’s degree programs out of 200 as “multidisciplinary in nature, with a liberal arts foundation. The degree is designed to provide multidisciplinary education and/or professional training in gerontology” (p. 24). The Bachelor’s degree requirement has similar core coursework, the sociology of aging, the psychology of aging, and the biology of aging along with an introductory course, research methods, statistics, and a senior seminar. Similar to the Associates degree, the Bachelor’s degree has a practicum or internship requirement. Different from the Associate’s Degree, the Bachelors curriculum adds 12 units of ‘curriculum clusters’ where related disciplines are brought in to create the interdisciplinary aspect of the degree. The four clusters are the humanities and aging, the behavioral sciences and aging, social sciences and aging, and physical science and aging. Finally, 6 units of electives are added to create a 39-42 unit core or base for a Bachelor’s degree. Bachelor’s degrees range from 120-130 semester units typically comprising of general education along with specified degree coursework. Because of the general education requirement, Bachelor’s degrees have some level of specialization in choosing the degree goal, but it is in the Master’s and Doctorate degree programs where much of the specialization with Gerontology takes place.

A Master’s Degree in Gerontology is defined by AGHE’s Standard as either being a Master of Arts or Master of Science Degree. The Master’s Degree is housed in many differing departments or schools depending on any given school’s focus, strengths, or fit for Gerontology within their specific system. Master’s Degrees typically range from 30-
60 semester units and from AGHE’s standard have both interdisciplinary and multidisciplinary facets to them. The distinctive with each new level of degree programs are the depth and breadth in which Gerontological topics are dealt with, upper division level courses, dealing more in depth than lower division courses. For example, an Associate’s degree level psychology of aging would be much more surface level and broad in topic where a Master’s level psychology of aging would have significant depth and breadth curriculum, focusing on more theory and research than a lower division ‘survey’ course. For the Masters’ degree program there is still a core requirement of Gerontology courses. This core includes Psychology or the mental aspects of aging, sociology or the social aspects of aging, and biology or the physical aspects of aging. AGHE’s core curriculum at the Masters’ level also includes gerontology electives, research statistics, and a practicum. The distinction with the Masters’ degree program lies in both the non-gerontology electives and the thesis or project. The non-gerontology electives are where specialization and multidisciplinary research come into play. Some common pairings with a Master’s in Gerontology are social work, public policy, and psychology. The electives allow for a more detailed and applicable approach to a specified facet of gerontology. The thesis/project is required in order to move on to Doctoral, research, or published work.

The last degree program AGHE’s speaks to in the Standards and Guidelines for Gerontology and Geriatric Programs is a Doctorate Degree. Gerontology as a stand-alone Doctoral degree is emerging, growing out of being a focus within other disciplines. As such, a core curriculum is laid out. The curriculum includes core coursework, similar to
that of every degree program. The core courses must cover sociological, psychological, and biological aspects of aging as well as including theories on aging. Gerontology electives and research courses are also included. The distinction within the Doctoral program is the residency and dissertation, which is approved by the doctoral committee. Some doctoral programs also include a comprehensive or qualifying exam. Each Doctoral program could look very different and could include various levels of specialization but Doctorate programs typically include between 55-69 semester credits. The Doctorate degree program is the degree program with the most flexibility as specialization and multidisciplinary foci create unlimited numbers of degree programs at the Doctoral level. The issue inherent with graduate and post-graduate degree programs is the issue of specialization. Doctoral programs tend toward individualized programs with a required core (O'Callaghan, 2011).

In moving from Associates degree programs, to Bachelors, then Masters, and finally Doctorate degree programs in Gerontology, the core curriculum has a similar base requirement but allows for more distinction and specialization and the degree program becomes more advanced. At every level, the programs are interdisciplinary, combining multiple disciplines to create a holistic view of Gerontology but the multidisciplinary factor, especially in application, is more apparent in the higher level degree programs.

Not only does the AGHE outline standards and core curriculum for degree programs, they add delineated core competencies that cut across all levels. The core competencies seek to address standards and measurable goals applicable to any degree program at any degree level. The Competencies consist of three categories and varying
benchmarks and goals depending on the category or domain. The three categories are foundational competencies, interactional competencies, and contextual competencies. AGHE has outlined how the competencies are to be used or applied to higher education as follows:

The competencies may be applied to gerontology programs with majors, minors and certificate programs at the associate, undergraduate and/or master’s level. Competency-based education and assessment will require the specification of anticipated knowledge and skill development for the varying program levels. Measurement of competency acquisition will relate to learning objectives, course assignments and evaluation tools (2014, p. 9).

These core competencies play a critical role in assessing and determining success at the academic level. They in conjunction with the standards and guidelines for Gerontology programs, create a streamlined means for Gerontology program development, assessment, growth, and creation.

The Association for Gerontology in Higher Education (AGHE) has defined standards and guidelines for Gerontology and Geriatric Programs in order to standardize and create conformity between academia and Gerontology as a discipline. Academic programs refer to courses of study that are academically credited within liberal arts or sciences (Farlex, 2015). They can be taken as a part of, before, or after degree seeking coursework. This would include concentration programs, minor, and certificate programs. These different types of coursework may seem very similar to degree-seeking coursework but can be sought during, after, or separate from a degree program.
First, concentration is defined as “a set of college or university-level courses and other educational experiences oriented exclusively or in large part toward gerontology. A concentration is an academic program but is not a degree program in and of itself” (Standards and Guidelines Committee of the Association for Gerontology in Higher Education, p. 78). A concentration in Gerontology is different from a minor but is described by the AGHE with the same requirements. A Minor in Gerontology is “an abbreviated or supplementary but educationally coherent and recognized program of instruction in gerontology pursued by a student seeking a degree in a major or principle area other than gerontology. A minor is not a degree program, but is used in conjunction with a degree program and is an academic program” (Standards and Guidelines Committee of the Association for Gerontology in Higher Education, p. 80). Both Concentrations and minors are tied to a 4-year degree and are by nature supplemental to a student’s major. There are some Master’s programs that offer either a minor or a concentration as well, but for the most part, both types of academic programs are tied to a 4-year Bachelor’s degree. The Curriculum for a certificate or minor per AGHE’s standards include 21-27 semester units inclusive of the same basic required courses as the degree programs, social aspects of aging, psychological aspects of aging, and health aspects of aging. A concentration or minor also includes an introductions course, a practicum, and a gerontological integrated elective. The difference in the concentration or minor curriculum is the addition of an integrated course that pairs the student is major with gerontology. A minor or concentration, similar to other programs may look different depending on which school is attended and where the Gerontology department is housed.
Not only are concentrations and minors academic programs outlined by the AGHE’s Standards and Guidelines for Gerontology and Geriatrics, certificate programs are outlined.

There are many types and levels of certificates in academia, but more specifically as academic programs within Higher Education. AGHE defines a certificate in Gerontology as “a document attesting to the fact that a person has completed a program of instruction and educational experiences in the field of gerontology at the undergraduate or graduate level, usually but not necessarily in connection with a non-gerontological degree program: a certificate is not a degree program but can be an academic program on its own (Standards and Guidelines Committee of the Association for Gerontology in Higher Education, 2008, p. 77). Certificate programs also exist at the Associates Degree level; however, AGHE’s distinction only mentions a certificate earned in an undergraduate or graduate degree environment. Certificate programs have evolved from three units to a more systematized process and program. There are some certificate programs still in existence that range from 3-18 units but, especially within AGHE, like all degree and academic programs, there is more consistency. There are two distinct categories of certificate programs, bachelor’s level and graduate level certificate programs. Even though there are two general types of certificate programs outlined by the AGHE, the curriculum is very similar. Both require the core courses on sociology and aging, psychology and aging and biology or health and aging. There is an elective requirement for gerontology courses and non-gerontology courses as well as a practicum. The certificate programs typically consist of 21-30 semester units. The difference major
difference between the bachelor’s level certificate program and the graduate level certificate program is focus.

The bachelor’s level certificate program AGHE outlines is unique from the graduate certificate program in that it responds to the local needs of the community. This continuing education certificate “is directed toward creating positive attitudes about aging and the aged...centering on the impact society has on the older population and the impact the older population has on society.” (Standards and Guidelines Committee of the Association for Gerontology in Higher Education, p. 37). This certificate program most similarly reflects the growth and change across the globe. The Graduate level certificate program tends to be more multidisciplinary in nature by AGHE’s standards. The goal of this program is to “enable graduates to integrate knowledge of gerontology into their own disciplinary field” (Standards and Guidelines Committee of the Association for Gerontology in Higher Education, p. 50). This type of curriculum focuses on research and specific knowledge applied to the issues of human aging.

After outlining and reviewing the core curriculum for both academic and degree programs as defined by the Association for Gerontology in Higher Education’s (AGHE) Standards and Guidelines for Gerontology and Geriatrics, the implementation and use of this core curriculum is addressed. The hope is that there is great consistency within each program despite differing foci and goals within the field of Gerontology. As this study deals with Bachelor’s degree graduates specifically in rural Placer County, California, an analysis of current AGHE Associates and Bachelor’s degree programs only within California are observed.
Current AGHE Programs

In looking toward the implementation and success of AGHE’s standards and guidelines for core curriculum, Gerontology programs offering Associates and Bachelor’s degrees were consulted in California. Research has also been published, specifically on this implementation at Kennesaw State University in Georgia, Atlanta that is relevant as it relates specifically to AGHE’s core curriculum.

Kennesaw State University in Georgia, Atlanta published research related to implementation of AGHE’s core curriculum and its effectiveness. The Gerontology department used AGHE’s core curriculum specifically in developing their Professional Development in Gerontology Certificate Program (PDGC). Speaking of the non-academic program courses, Karcher states, “included are biological, psychological, social and cultural aspects of aging, economic and political realities, end of life issues, spirituality and positive aging, and aging programs and services” (Karcher & Whittlesey, 2007, p. 216). Their program was designed to meet a need for professionals who are working with the emerging Baby Boomer adult generation to be trained to “study aging in order to provide better services for their elder clients”. Not only did the creation and implementation of a core curriculum assist universities in achieving their academic goals, it allowed for a unique opportunity to create interdisciplinary curriculum on the subject of Gerontology. Karcher and Whittlesey (2007), in their implementation of the certificate program, suggest that colleges and universities are missing a large market by not offering non-academic courses in Gerontology to the workforce (Karcher & Whittlesey, 2007).
There are currently over 150 approved members in the Association for Gerontology in Higher Education, twelve members in California, ten of which are in academia. Out of the ten participating institutions of higher education, six of them offer either concentrations, certificates, or Masters Programs only. This leaves only four schools that offer either an Associate’s degree or Bachelor’s Degree in California. Two of them offer Associates and the other two offer Bachelor’s degrees. The two that offer Associates degrees are American River College, offering an Associate of Arts in Adult Development and Aging and Chaffey College, which offers an Associate in Science Degree in Adult Development and Aging. The two Bachelor degree programs both offer Bachelor of Science Degrees and are California State University, Sacramento and the University of Southern California.

The most recent growth and enrollment of these four Gerontology programs is analyzed along with the distinctions within the individual programs. When observing the degree requirements and growth of the Gerontology programs, the proximity of these four colleges becomes apparent and is called into question. Two of them are located in the Sacramento Region (American River College and California State University, Sacramento), and two of them are located in the Los Angeles Area (Chaffey College, and University of Southern California). Due to the locations of the schools in proximity to one another, the idea of these two being ‘sets’ of schools that feed into one another comes up. Do the Bachelor’s degree Universities attract graduates or students from the Associates programs within Gerontology or are each of the schools independent from one another?
The initial data found are from Integrated Postsecondary Education Data System (IPEDS) who is the primary source for data on colleges and universities in the US. The data IPEDS has posted are on degrees conferred both in the 2012-2013 and 2013-2014 school years. The data from both years creates a great comparison in order to see growth. The data available however are not completely current so it became necessary to reach out to each of the Gerontology departments to confirm the data reported as well as to collect more recent data, especially regarding current enrollment.

American River College is a community college located in Sacramento. They offer an Associate in Arts degree in Adult Development and Aging with a required concentration in a multidisciplinary field. The degree consists of the gerontology core plus coursework in one of the concentrations. The concentrations include Business, Case Management/Social Services, Environmental Design, Health Care, Recreation, and Social Policy/Advocacy. The Gerontology department is housed in Family and Consumer Sciences/Human Sciences. According to IPEDS, 19 Associates degrees were conferred in 2012-2013 and 17 were conferred in 2013-2014. Upon contacting the department, the conferred degrees were confirmed. ARC could not provide current enrollment data or numbers of students but did mention that the programs do seem to be growing within the Gerontology discipline.

Chaffey College is the second community college that offers an Associate’s degree in Gerontology in California. Chaffey College is located in Rancho Cucamonga and offers an Associate of Science degree in Adult Development and Aging. The Gerontology department is housed in the Family and Consumer Sciences/Human
Sciences School and according to IPEDS, 5 degrees were conferred in 2012-2013 and 6 were conferred in 2013-2014. The Degree requires a core Gerontology course load of 15 units with 9 Gerontology electives. In their materials, they state the interdisciplinary nature of the degree with multidisciplinary application including medicine, law, architecture, mental health, and social work. Confirmation of IPEDS data or information on current enrollment was not collected, as Chaffey College was not responsive to requests for data. It does seem to be growing, even though it is slow growth with small graduate counts.

The first of the two 4-year universities that offer Bachelor’s Degrees in Gerontology is California State University Sacramento (CSUS). CSUS is located in the heart of Sacramento and offers a Bachelor of Science in Gerontology. The Gerontology department is housed within the College of Social Sciences and Interdisciplinary Studies. According to the IPEDS data and confirmed by the Chair of Gerontology, CSUS conferred 13 Gerontology BS degrees in 2012-2013. The IPEDS 2013-2014 data were inconsistent in comparison to what the Chair reports. She reported having graduated 26 Bachelor’s degrees in 2013-2014 with anticipation of graduating at least 26 more for spring 2015 (Osborne, personal communication, 2015). The current enrollment in the Gerontology program is estimated at 240 students and growing annually. The Bachelor’s degree at CSUS consists of 48 major units which include the required Gerontology core (24 units), an interdisciplinary core (15 units), as well as elective units (9 units).

The last of the schools in California with a Gerontology Associates or Bachelor’s degree is University of Southern California (USC). USC offers two Bachelor of Science
Degrees within their Gerontology department, housed in their School of Gerontology. First, the Bachelor of Science in Human Development and Aging and second, the Bachelor of Science in Lifespan Health. The Human Development and Aging degree most closely matches AGHE’s core curriculum standard. This degree is offered with one of two tracks, social science or health science. IPEDS reported 13 Bachelor degrees conferred from USC in 2012-2013, which was confirmed by USC. They have experienced growth in the number of degrees conferred, with 23 being granted in 2013-2014. This number is in conflict with the IPEDS reported data of 17 degrees conferred in 2013-2014. The current enrollment for the Human Development and Aging degree is 51, which is a decrease from the two previous years. A table summarizing the schools and findings follows for clarity and direct comparison.

Table 1: Estimated Current AGHE Associates and Bachelor program #s in CA.

<table>
<thead>
<tr>
<th>School</th>
<th>Degree</th>
<th>'12-'13 degrees</th>
<th>'13-'14 degrees</th>
<th>Current enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>American River College</td>
<td>A.A.</td>
<td>19</td>
<td>17</td>
<td>unknown</td>
</tr>
<tr>
<td>Chaffey College</td>
<td>A.S.</td>
<td>5</td>
<td>6</td>
<td>unknown</td>
</tr>
<tr>
<td>CSU Sacramento</td>
<td>B.S.</td>
<td>13</td>
<td>19</td>
<td>240</td>
</tr>
<tr>
<td>University of Southern CA</td>
<td>B.S.</td>
<td>13</td>
<td>17</td>
<td>51</td>
</tr>
</tbody>
</table>

Overall, it seems there is a slight trend of growth in the degrees conferred and varying results in the current enrollment. It appears as though CSU Sacramento is the only one with large growth and enrollment. The limitation here is that CSU Sacramento is the school that the author is most familiar with and the data were accessible, current and accurate. Data from the other three schools were confirmed in some cases but may
not be completely accurate due to distance. With the enrollment so high in the Gerontology program at CSU Sacramento, the forecasted supply of Gerontology graduates in the Northern California area is strong. As the age profile shifts in the US toward an older society, individuals with an interdisciplinary Gerontology degree should be marketable.

Moving from evaluating the supply of Gerontology graduates in general with the core curriculum and specifically, within California, the demand and market are now analyzed. Not only is there growth in the field of Gerontology on a demographic and academic scale, there is a growth in the industry. There is a need or demand for an increase in aging services. Despite the fact that the numbers have already been addressed in general, an age profile of the two generations that make up most of the aging population is called for along with an analysis of the Gerontology industry and employment profile.

Age Profiles

As the aging population is defined, dissected and profiled, it is crucial to remember that the data are general. They do not necessarily apply to every aging adult and in many cases; individuals do not fit the stereotypes of their cohort. As has been mentioned before, the aging population can be separated into three categories, the young old (65-74), middle old (75-84), and oldest old (85-100) (Transgenerational Design, 2009). These are separate distinctions based on chronological age not based on generational cohort. Any generational cohort could include aging adults in all three categories at any point in time. There are two more age categories commonly referred to,
centenarians (100-109) and super-centenarians (110+) (Farlex, 2015). Currently, the Baby Boom generation includes those in the young old with the oldest of the Baby Boomer cohort turning 69 in 2015. The Silent Generation cohort includes individuals born during the Great Depression, who also fought in the Korean and/or Vietnam Wars. They make up the current middle old and oldest old category to date with the oldest of their cohort reaching 90 in 2015. Any individual over 90 belongs in another generational cohort, the GI or Greatest Generation (those born between 1901 and 1924). The youngest of the GI cohort turns 91 in 2015 and the oldest of that cohort is 114, making up the oldest old, centenarians, and super centenarian categories of older adult. One of the problems with the GI and Silent generation cohorts is a lack of proof of age. Many members of this cohort do not have an official Birth Certificate, as those were not widely mandated as an individual record until 1946. Additionally many individuals from those cohorts immigrated to the United States and their Birth Certificate, if one exists, was lost in the move to the States. A profile of both the Silent Generation cohort and the Baby Boom cohort are beneficial in understanding the population group being address at this time.

Silent Generation Profile

The Silent Generation cohort consists of those born from 1925-1945. They are commonly referred to as “traditionalists” and there are approximately 20 million Silent Generation individuals alive today (Howe, 2014). These individuals currently range from 70-90 and are a large percentage of the aged population. The Silent Generation cohort was born in the midst of Wars, shaped by the Great Depression and are called ‘silent’ for
their ‘quietness’ with which their lives appear to be lived. “The generational personality could best be described by one word: loyal” (Lancaster & Stillman, 2002, p. 19), very often putting aside individual goals for the common good. The Silent Generation cohort is also marked as a quiet and committed generation, often spending their entire work life at one company (Rickes, 2010). Many members of this generation grew up with nothing, received education, married and had families early, and then entered elder-hood as affluent adults (Grabinski, 1998). The Silent generation cohort is also sometimes referred to as the “lucky few” where many did not serve in the World Wars, were not grown during the Great Depression, and hit retirement age right before the great 2008 recession, although they did serve and live through the Vietnam and Korean Wars. They are not know for great changes, rather for “working within the systems” (Howe, 2014, p. 1). The Silent Generation cohort is very much known for just that, playing nice, staying within the rules, and maintaining tradition. As they have aged, they have pension plans, they own their homes outright, and they are typically well settled for retirement. They are in contrast the following generation, the Baby Boom Generation.

Baby Boomer Profile

Members of the Baby Boom generation, those born between 1946-1964, are adding to the numbers of the Silent generation individuals, those born between 1925-1945 and the GI generation, those born between 1900-1924, as they rapidly enter aging adulthood. There were approximately 80 million births in the United States in the 19 years from 1946-1964 (Transgenerational Design, 2009). This increase in birth rate is due to the post-World War years, creating one of the largest generational cohorts in existence.
Taking into account deaths and immigrants, the US Census Bureau (April 2014), concluded that there are currently 76.4 million Baby Boomers in the United States. This is the number that is referred to when referencing the United States “senior tsunami” (Pollard & Scommenga, 2014). In the United States, 2011 was the beginning of the 76.4 million Baby Boomer cohort turning 65 and “by 2050, the percentage of the US population over 65 will increase from 13% to 20%” (Transgenerational Design, 2009, p. 1). The Baby Boomer cohort is worth studying and understanding as the target market for many industries across the US. General characteristics and profiles of the Baby Boom cohort were repeatedly cited in articles included in the literature review.

Many authors have sought to describe this generation in general terms. It is important to note here again that despite the stereotypes and general characteristics, each individual within any generation will not perfectly relate to any or all of the characteristics. Dyctwald (1999), as early as 1999, profiles this generation in his book, *Health Aging* as time-conscious, do it yourself, and accustomed to customer service. Specifically Dyctwald distinguishes this generation by the following six characteristics, each of which he assigned based on published statistical evidence, not his own research studies (Dychtwald, pp. 192-193):

1. They are more concerned about a healthy lifestyle and healthy aging
2. They crave information and will go to any lengths to get it
3. They demand convenience along with excellent service
4. They expect evidence of quality and expertise
5. They refuse to accept advice at face value
6. They are willing to explore alternative therapies

Butler (2008) describes the Baby Boomer cohort as vigorous, robust, active people; He credits the Boomers with constantly redefining old age and speaks to the diversity of aging within this generation (Butler, 2008). As this generation of adults ages, it is anticipated that there will be a growth and increased need for the services and needs of the older adult population. Butler (2008) discusses how this population is growing and are a very diverse group of people with varying needs and the funds to provide for themselves. Butler states, “Americans over 50 control 70% of the nation’s wealth” (p. 23). Davies (2008) who profiles the Baby Boomer cohort in his practical theology of aging discusses the culture of the Baby Boomer cohort as striving to remain youthful; they seek a “long active life of productivity and meaningfulness”. He goes on to mention how they resist the ideas of aging and desire to remain youthful, by their own, or society’s definition of youth (Davies, p. 280). Davies research is not based on his own studies but rather he references research done by others including Dychtwald (1990), Smith and Churman (2007).

It is critical to mention that despite the generalization and profiles of both the Silent Generation and Baby Boomer cohorts being occasionally applicable, not all individuals of these generations fit into the generalizations. It is important to remember that all individuals are different with differing needs, desires, and goals. Caution should be taken in applying general stereotypes to every interaction (Becton, Walker, & Jones-Farmer, 2014). Becton, Walker, and Jones-Farmer did a study of generational workplace behavioral differences based on these stereotypes where they surveyed over 8,000 job
applicants for hospitals in the southwestern United States. They asked a series of questions based on past high school, college, and previous workplace assignments regarding a variety of topics including job mobility, compliance with rules, terminations, and willingness to work overtime. The study found that although there were some workplace behavioral differences found, the statistical differences were not enough to justify adjusting employer behavior. The study also noted that the results differed from the majority of generational difference research which hypothesized that members of the Baby Boomer cohort would have less job mobility and higher compliance related behaviors in comparison to Gen Xer’s and Millennials and that Gen Xers would be less likely to work overtime than Baby Boomers. The study concluded by specifying that the focus of the study was on behavior not generational values.

An understanding of the generalizations and stereotypes of these generations, however, alters the response by the field of Gerontology. As the industry expands and the aging population grows, this new wave of aging adults, based on the profiles, may not want special treatment as an older adult. A unique opportunity exists to meet the needs of the aging population as current lifestyles are sought to be maintained amidst changing needs.

After delving into an age profile of both the Silent and Baby Boomer Generations as well as touching on some misconceptions about age in general, the different cohorts of the aging population are more easily understood. Having a generational knowledge is critical in moving toward understanding the target market and the necessary changes in both academia and industry.
AGHE’s core curriculum has streamlined this process to create a foundation from which gerontology graduates have a common understanding. Not only is the creation of the programs and curriculum critical but assessing the program against its goals and stated outcomes is imperative. One method of assessment is analyzing and surveying the current industry growth. With demographics shifting, programs becoming streamlined in their interdisciplinary curriculum, and unique needs of the current aging population, the growth of the industry is necessary.

Gerontology Industry and Employment Profile

With the knowledge of the existing status of Gerontology in academia, it is crucial to discuss and look at the current Gerontology Industry. What does the industry look like? Which graduates are receiving the jobs within the field? As has been seen, education and program growth is typically in response to the demographic shift and environmental factors. Additionally the demographics shift toward the aging population and the environmental factors around the growth in academia have been seen. How then, is the field of gerontology currently responding, if at all, and what does growth look like, specifically in multidisciplinary fields? How is the field of Gerontology prepared to deal with this change in the market? The Association for Gerontology in Higher Education (AGHE) has responded to this growth in the aging demographics in their brochure entitled “Careers in Aging”. They recommend and suggest gerontology as a growth area for multiple fields as well as detailing different options for education and career pathways (Association for Gerontology in Higher Education, 2008). “The (Baby Boomers) will demand – and respond to – products and services that help them maintain their active
lifestyles and activities, flexible scheduling, continuing education, travel, intellectual and stimulating experiences, and opportunities for companionship…Boomers will move to the mountains, beaches, islands, college towns – where the physical and intellectual actions is…half of them will expect to work at least part-time once they retire and they’ll want offices in their homes – with high-speed internet connections for those with two or more computers” (Transgenerational Design, 2009).

Careers in the field of Gerontology in multidisciplinary fields are imbedded throughout much of the literature reviewed. Such industries included are Bio-Gerontology. Teaching, Policy, Planning, Practice, Academic Research, Health and Public Advocacy, Caregiver Support, and even Builders. Following is a review of each study.

In 2002, Turner (2002) published qualitative research data from a telephone survey study of six Gerontology doctoral programs throughout the US. Her research was focused on finding out more about the specific program foci as well as output of graduates and employment, specifically what fields of employment. This is very similar to the current study except this study was done from the lens of the University. Turner successfully conducted telephone surveys with the administration of each of the six programs and asked both quantitative and open-ended questions in gathering her data. She then summarized and discussed her findings in a descriptive fashion. The research found that many of the doctoral programs focused on research, with a few branching into Policy, Planning, and Practice. The study concluded and recommends “the consensus of need for additional doctoral program development suggests a belief that society would benefit
greatly should there be more individuals with doctoral training in gerontology policy, planning, research and practice” (2002, p. 166).

Meyer (2003) cited a quantitative study that had been done in 2000 and published in German whereby data were collected across Europe to analyze the current state of Gerontology degree programs as well as formalize the need for the European Master in Gerontology as a tool and means to systematize Gerontology degree programs across Europe. From the data, the used the objectives created from the Bologna Conference, which outlined metrics for academic programs throughout Europe, to recommend the structure and core competencies for a Masters in Gerontology. The study concluded with an emphasis on the “vocational competence to act”, stating that the core modules must have vocational (gerontological) meaning in order to be included in the academic curriculum. Meyer recommended that academic research be conducted when replacing or adding any core module in relation to the module’s “vocational competence”. Meyer’s research suggests that there is need, especially across Europe for academic research in the field of Gerontology, specifically as it relates to industry and vocational need.

Shostak (2007) looked at the dynamics of aging in conjunction with the existing theories of aging in an attempt to answer the bio-gerontology questions brought about by an increasingly aged society. Shostak speaks to the need for gerontologists in research and bio-gerontology fields as the knowledge of aging statistics, theories, and sources are discussed. The two trends he cites are increased life expectancy with living younger longer. He addresses survivorship where the elderly are constantly ‘pushing the envelope’ of aging (p. 66) as well as the environmental changes which extend life. Shostak goes
into detail regarding the theories of aging from predisposed genes and mutations, to the second law of thermodynamics and stem cells and aging, recommending additional research. The article summarizes with the idea that in Western and Western-like countries, with or without an accurate theoretical explanation, aging adults are living longer, growing in number, and creating a field of study that may have been underdeveloped until now.

Robert Butler, Pulitzer Prize winning gerontologist and often referred to as the ‘father of Gerontology’ published some of his research in his work The Longevity Revolution (Butler, 2008). In all of his research, Butler proposes multiple fields of study including interdisciplinary research and public advocacy (p. 119), as well as the redesigning of academic geriatrics and healthcare (p. 221). He includes in his appendices, a table of “Silver Industries” or Businesses involved directly with the Mature Market. These industries include (pp. 408-409):

Table 2: Silver Industries

<table>
<thead>
<tr>
<th>Financial</th>
<th>Legal Services</th>
<th>Health-Care</th>
<th>Housing</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance</td>
<td>Wills/Trusts</td>
<td>Long-Term Care</td>
<td>Housing for Retired Persons</td>
<td>Clothing</td>
</tr>
<tr>
<td>Banking</td>
<td>Advanced Directives</td>
<td>Medical Equipment</td>
<td>Household Products</td>
<td>Travel/Tourism</td>
</tr>
<tr>
<td>Financial Management</td>
<td>Power of Attorney</td>
<td>Personal Care and Transportation</td>
<td></td>
<td>Information and Communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Education</td>
</tr>
</tbody>
</table>

Roberts (2009), published his research in the Chronicle of Higher Education, and cited the Bureau of Labor Statistics data on faculty job openings in the coming 7 years. He refers to the surge in faculty from the 1960’s-1970’s and predicts that as these
individuals retire, there will be an estimated 662,000 faculty openings in the coming years. Roberts lists Gerontology as the third of eight fields in which growth is anticipated and recommends academia as a field of study within Gerontology. He states, “The aging process will take on a more prominent role in society as the baby-boom generation ages, making studies like gerontology a growth area” (p. B22).

The Sacramento Bee published an article (ARA Content, 2009) about the Building industry and how home products can be implemented at the builder level to ensure aging in place. The specific technology referenced is called Universal by Design. This technology can be utilized by builders to ensure a home is certified as an age in place home. Not only does the implementation of such technology create Gerontological application in the building industry, it indirectly speaks to the need of gerontologists in the research and development and technology fields.

In their work, *Physical Change & Aging*, Saxon, Jean, and Perkins (2010) outline multiple industries with gerontological application as they address guiding helping professions. They take great care in their book to address each system in the body and the most typical issues that occur with age in each system. They conclude their research and guide with a chapter on caregivers and the challenges that this population faces. In discussing caregiver burnout, case managers and social workers are recommended as industries of growing including educating caregivers of all local resources and options. “It is important that professionals who work with older adults realize the contributions that caregivers make to the care recipients’ care” (p. 419), referring to various facets of Caregiver support industries.
As seen by each summarized study, there are varying disciplines a degree program or student can pair or apply in cooperation with Gerontology. The University of Southern California has also published some research on how Baby Boomers, specifically, are challenging the stereotypes of aging and creating new job opportunities in the field (Mangan, 2011). Mangan (2011) also mentions how consumer goods, travel and transportation are welcoming employees with expertise in this growing segment of their customer base. This study hopes to see the same welcoming effect in varying industries across semirural northern California.

It is critical to note again the distinction between the sick and well sides of aging. Many of the descriptive and evaluative studies mentioned and recommended several career path options for both the sick and well sides of aging. A summarized table of possible career paths mentioned from the research is below:

Table 3: Recommended Career Paths for Sick and Well Sides of Aging

<table>
<thead>
<tr>
<th>Sick (Ill) Aging Career Options</th>
<th>Well Aging Career Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio-Gerontology</td>
<td>Policy</td>
</tr>
<tr>
<td>Caregiving/Care Management</td>
<td>Building/Construction/Housing</td>
</tr>
<tr>
<td>Research</td>
<td>Consumer Goods- travel, transportation</td>
</tr>
<tr>
<td>Geriatric Nurses</td>
<td>Academia/Research</td>
</tr>
</tbody>
</table>

Some programs focus on the sick side of aging, while other programs focus on both the sick and well sides of aging. Focusing on both seems to be truly interdisciplinary look at Gerontology. The market for the sick side of aging tends to be more often addressed, as there is constant need. The well side of aging market, however, has room for growth, innovation, and applied knowledge. This study addresses both sides of aging
but the industry profiles lean toward the well side of aging more than the sick. The research speaks to the job market being viable for an interdisciplinary graduate.

As early as 1999, Dyctwald addressed the future of Gerontology and mentions care management as one of the most rapidly expanding fields. Care management allows an older adult to age distinctively, addressing their specific needs with specific solutions. Dyctwald also speaks to the media and how they have a great influence on the way the population, as a whole, perceives aging. Both of these fields among many others are key in responding to the Baby Boom Generation’s drive to leave a unique stamp on life. Butler echoes this idea when he mentions the need to adapt the industries to meet the varying needs of the new older adults (Butler, 2008).

Industries that are currently dealing heavily with the aging population are beginning to implement nonacademic courses for their employees in the field of Gerontology to educate the workforce that already serves the aging population. This shift has already affected the “overall occupational structure” (Karcher & Whittlesey, 2007). Specifically, in the home building industry, certifications for ‘aging in place’ homes are desired and sought after (Karcher & Whittlesey, 2007), and technology like ‘Universal by Design’ is being certified and implemented across the country (ARA Content, 2009). Majeski, Damond & Stover touched on the importance of senior-provider organizations, networking groups and professional gerontology groups to connect students to the field and creating an opportunity to come up with professional goals regarding their work in the field of Gerontology (Majeski, Damond, & Stover, 2007).
In 2009, Lee Roberts published an article identifying gerontology as a growing field with high potential for academic jobs of the future. Among chemistry, education, and energy, the field of gerontology is expected to grow exponentially as Baby Boomers reach retirement age. Not only will there be opportunities for professors as the current professors retire, but the entire population is aging, ‘making studies like gerontology, a growth area’ (Roberts, 2009). Other industries that have seen growth in the Gerontology facet are technology, caregiving, education, and building (Transgenerational Design, 2009).

James Davies (2008), in his work on the Theology of Aging, gives seven great marketing questions for meeting the needs of the aging population. These can be applied to any organization to evaluate whether the organization is properly reflecting the shift in demographics (Davies, 2008).

1. What percentage of resources is devoted to the aging population? Is it proportional to the number of people represented and targeted?

2. How can we continue to care for senior adults in our current organization while supporting an emerging segment for the new old?

3. In what ways have we designed this organization so it appeals to those whose focus is on being more youthful, active, productive and living longer?

4. What specific strategies/teachings are employed to meet the unique developmental needs of this stage?

5. What is our targeted organizational vision to and through adults in the last third of life?
6. When will we hire someone with special training in Gerontology?

7. Because products typically attract people within 12-15 years of the median age group, what is our primary target age range(s), and how many mature adult groupings do we need?

Finally, Marylhurst University in Oregon teaches Gerontology graduates how to enter the field of aging with Career Coaching, informational interview practice, and ask key, specific questions of their students. Some of the questions include “Where are you right now? What are you doing in your development as a gerontologist? What one idea has most captivated you an, has stayed with you, of all the ideas which you’ve engaged with during your learning?” (Sasser, 2005) Marylhurst teaches a holistic, interdisciplinary curriculum, which empowers graduates to be successful in their specific field of study. This is a great model of how to train graduates to create advantage in comparison to their competitors seeking employment in the industry. This advantage can be leveraged and applied as ‘signals’, when presented to a potential employer in seeking to enter the job market, creating viable job market opportunities for the graduate. By not only seeking industries where growth is seen or predicted, Gerontology graduates can distinguish themselves by participating in Job Market Signaling, combining both research and theory.

In Summary, the literature reviewed addressed varying aspects of the hypothesis, evaluating whether an interdisciplinary Gerontology undergraduate can find a job in multidisciplinary fields. From the theoretical basis of Job Market Signaling, to viewing the demographic shifts, growth in Academia, to AGHE’s core curriculum and current
programs to aging profiles of the Silent and Baby Boom generations, and finally looking at Gerontology as an industry/employer, a thorough picture of theory, research, and status quo is clear. The gap between supply of graduates and demand of jobs is closing in, becoming more grounded as the literature is reviewed, industry analyzed, and hypothesis set. It is time to design and collect data with regard to the foundation laid previously.
Chapter 3

PROJECT OVERVIEW

Introduction

The purpose of the study is to explore the job market for a graduate with an undergraduate degree in Gerontology. The researcher’s literature review shows a growth in interdisciplinary programs throughout universities in the United States and across the world. In the United States, there are over 150 members in the Association for Gerontology in Higher Education (AGHE), collaborating to streamline and effectively teach Gerontology through the US. Universities like California State University: Sacramento, University of Southern California and the University of Maryland: Baltimore are becoming more creative in the teaching mediums, studying abroad and including multimedia coursework to reach varying groups of people (Mangan, 2011). In the United States, The Association for Gerontology in Higher Education has assisted in monitoring and directing the growth in the United States by creating a Core Curriculum along with Competencies to guide the growth and in consistency. Globally, The University of Cape Town in South Africa has redesigned their degree programs to a multidisciplinary model in response “to social, cultural, political, and economic changes in [the] environment” (Moore, 2003). While in Europe, there has been a push toward the creation and consolidation of the Gerontology higher education system. The shift has allowed for a “European-wide comparable, multidisciplinary perspective” (Chambers, et al., 2005) of Gerontology as well as answering the “fundamental disciplines of gerontology such as social-, psycho-, and health-gerontology” (Chambers, et al., 2005).
More recently, the University of Central Lancashire in the UK began implementing a foundational degree program, which is equivalent to a Bachelor’s degree program, to “enable clinicians to feel valued…and has ensured a curriculum that is relevant and current to the needs of practice” (Meyer, 2003). This foundational degree program was developed with the use of focus groups or workshops. “The interdisciplinary nature of the foundation degree framework necessitated the need to consult with a range of practitioners” (Meyer, 2003). Geroontology is one such field. Ken Dyctwald, in his work, *Healthy Aging*, speaks to not only the opportunities for interdisciplinary gerontologists, but also the great need in the future of Gerontology (Dyctwald, 1999).

Gerontology programs, which follow the Association for Gerontology in Higher Education (AGHE)’s core curriculum, are interdisciplinary, in nature, able to stand alone as a synthesized degree program. California State University Sacramento is a great example of this type of program. Housed in the Social Sciences & Interdisciplinary Studies College, the undergraduate degree provides for a holistic, interdisciplinary study of Gerontology using AGHE’s core curriculum and competencies. Gerontology programs can also be paired with multiple degree foci, as seen in American River College and University of Southern California’s degree program outlines in the literature review, to create a multidisciplinary applicable graduate; able to apply their education in multiple facets of industry.

Lowenstein (2005), in her studies in Israel suggests multidisciplinary degrees paired with the fields of higher education, law, social work, policy, architecture, and even environmental planning. USC has created an interdisciplinary degree by emphasizing
Gerontology with health programs (Mangan, 2011); and Roberts adds an emphasis of need in Higher Education, specifically professors across the nation (Roberts, 2009). In his book *The Longevity Revolution*, the late Robert Butler advocates for multidisciplinary research in health and public advocacy. Butler also speaks to the need to redesign the healthcare and academic geriatric programs (Butler, 2008).

There is a great wave of aging adults with growing adjustment and adaptation needs in order to maintain quality in their new stage in life. By striving to “promote a deeper sense of purpose, fulfillment, and meaning” (Davies, 2008) with knowledge of gerontology, one can ideally promote longevity and quality of life. The purpose of this study is to see how a graduate with a degree in Gerontology is accepted in varying industries and marketplaces to assist an organization in rising to meet the needs of this growing, changing, aging population. The main research questions the researcher asked are “Is there a job market for Gerontology graduates in the semirural/semi semirural areas of Northern California? If so, what does it look like?”

Research Design

Overview:

This study’s research design consists of qualitative data collected from focus group(s) of 5-10 individuals representing varying industries in the northern California semirural area. The researcher tape-recorded the focus group(s) for transcription after the focus group(s) concluded. The researcher applied phenomenological methods in analyzing, coding, and interpreting the participant’s responses to the focus group questions. In addition to the focus group questions (Appendix B), the researcher also
collected demographic data (Appendix C) to assist in the analyzing, coding, and interpretation of the focus group responses. The application of phenomenology allows for the common themes and responses about employing Gerontology graduates to be identified. Much of the focus group structure and question creation was formatted after a model outlined in “Guidelines for Conducting a Focus Group” (Eliot & Associates, 2005). Eliot & Associates defined the reason a focus group is desirable and argued for the benefits of a focus group. The article provided checklists and samples for defining a focus group, designing the focus group questions, recruiting and preparing the group, conducting the focus group, and finally for analyzing the data collected. Many of the examples given in the article were used when drafting the focus group materials for the study.

Variables:

The research variables for this focus group study include the individual responses from the focus group as well as the demographic dimensions of the study. Some of the demographic variables include industry, age, gender, knowledge of gerontology, and a history of working with 60+ adults.

Methods

Focus Groups:

When looking to design and collect data, the best method of collection was researched and found to be the focus group (Eliot & Associates, 2005). In seeking the viability of the market for an interdisciplinary graduate in Gerontology, the author sought to address members of the industry using the most effective communication channel. Based on
research of program and course development as well as interdisciplinary studies and the current industry for Gerontology, focus groups were selected as the chosen method. The University of Maryland implemented interdisciplinary focus groups based on the idea that an interdisciplinary community was needed to assess effectively. “These (focus groups) should enhance the quality of gerontology programs and assure that graduates possess the knowledge they need to effectively work with old adults” (Majeski, Damond, & Stover, 2007).

Philip Clark at the University of Rhode Island utilized an interdisciplinary committee to represent the market including academics, clinical providers, agency and organizational representatives. They sought to blend theory and practice, acknowledging the need for the current realities and changes to affect higher education (Clark, 2002). Moore also implemented focus groups to seek a holistic picture in order to advance knowledge, validate curriculum, and create effective educational directives (Moore, 2003). Sasser used focus groups, but comprised them of individuals from the community to see the local needs of the area and how those specific needs could be met (Sasser, 2005).

A focus group as a research model consists of the designing and implementation of the focus group process. In designing a focus group, it is crucial to define the focus group, design focus group questions, recruit and prepare adequately for the focus group participants. There are also specific steps in conducting the focus group as well as in analyzing the data collected from the focus group.
A focus group is defined as “a small group of six to ten people led through an open discussion by a skilled moderator. The group needs to be large enough to generate rich discussion but not so large that some participants are left out” (Eliot & Associates, 2005, p. 1). Focus groups are typically limited to 10 carefully constructed questions, are typically no more than 90 minutes in length. When designing the questions for the focus group, it is important that the questions are short, to the point, that they are singular in focus and open ended so as not be answered with a simple yes or no answer. Focus group questions are usually organized with a couple initial engagement questions, several exploration questions, and an exit question to conclude. Recruiting and conducting the focus group also consists of several steps including considering homogeneity and comfort level of the participants, as well as varying recruiting methods. One of the methods of recruiting is the ‘snowball’ or chain referral method of sampling. “The snowball sampling outreach strategy finds an individual (the “source”, also referred to as the “seed”) who has the desired characteristics and uses the person’s social networks to recruit similar participants in a multistage process” (Fullerton, Lee, Lim, & Sadler, 2010, p. 370). The recruits continue to contact other recruits until enough of a sample size has been collected. This referral method is often used with harder to reach or niche populations and typically is used in qualitative studies.

Once the designing and recruiting is completed, the conducting and analyzing of the focus group begins. In order to conduct a successful focus group, the moderator must ensure that the preparation is completed with questions, recording methods, consent forms, demographic sheets, and logistical meeting needs. The moderator must listen well
and not lead with responses or questions. The moderator must be able to handle the group dynamic and manage challenging situations should they arise. Once the focus groups are completed, the moderator must analyze the data collected. This can be done in an excel spreadsheet, listing out demographic information and responses to questions. The responses are coded based on common categories, key words, or themes and then sorted to find majority themes, words, similarities. The synthesized data can be reported quantitative or qualitatively in the research study.

One of the concerns with using interdisciplinary focus groups is the potential for vested interest in specific departments to create an obstacle to interdisciplinary studies (Lowenstein, 2005). This concern, once identified, can be guarded against. The evidence in favor or interdisciplinary focus groups as the most effective means of gaining valuable information across industries allows a focus group to be the means sought in collecting job market data for the project.

Sample:

The procedures for the study consisted of focus group(s) of 5-10 participants from various industries in the Northern California semirural/semi semirural community. The researcher capped each focus group(s) at 10 participants and conduct additional focus group(s) as additional participants showed interest. The focus groups participants were recruited using the expert sampling method in which the researcher sought individuals who are ‘experts’ in their industry or field. These ‘experts’ were sought using the researcher’s existing network of contacts as well as the researcher reaching out to additional industry experts. The snowball or chain referral method of sampling was also
used in collecting participants. In this sample method, the researcher asks existing contacts if they knew of or could ask their contacts to participate in the study. The participants were also sought out by industry categories with an emphasis on the possibility of interdisciplinary job opportunities. Some examples of sought after industries included Higher Education, Policy, Healthcare, Consulting, Housing, and Caregiving. The inclusion criteria for the focus groups was employment in a local industry and a willingness to participate. Each participant is also cognitive and emotionally capable of responding. There are no inducements other than the value of the participant’s information in studying the marketability and job placement of an Interdisciplinary Gerontology Graduate in Northern California.

Human Subjects Assurance:

The Committee for the Protection of Human Subjects/IRB at California State University Sacramento (Appendix A) approves this study. The study was determined to be ‘exempt’ as it relates to test, surveys, interviews, or public observation per Exemption 45 CFR 46.101(b) (2). (US Department of Health and Human Services, 2004). All Human Subjects approval for the project was sought and approved prior to the focus group solicitations or meetings. Each participant signed a ‘Consent to Participate form’ prior to participating in the focus group. The consent form details the purpose and design of the study as well as ensuring confidentiality. The researcher also verbally covered the material in the consent form to reiterate the importance of the focus group as well as the validity of the study as a whole (Appendix D). The author chose to use probing questions
in the focus group discussion as more research lead the author to believe additional questions were necessary (Eliot & Associates, 2005).

Data Collection and Analysis

Each member of the focus group was given a participant id # as they entered. Each participant filled out and signed a consent form as well as a demographic sheet (Appendices D & C). The demographic sheet ties the verbal responses with the demographic information of each participant. The discussion data were collected by tape recording the focus group session(s). The recordings were transcribed word for word via playback of recordings into excel, by the researcher personally who then sorted common themes, keywords, and responses, noting any demographic data that applied. The researcher collected and analyzed the data as the moderator of the focus group. The data were analyzed after the conclusion of the focus group(s). The researcher and the researcher’s faculty sponsor only analyzed the data. The recording of the focus group was replayed while the researcher transcribed notes from the discussion(s). The transcription was input into an excel spreadsheet noting the participant id and the response. The responses were pared down, searching for key words and common themes. The researcher looked for similarities and differences in responses, coding them by answer when applicable. The codes and key words were sorted to note and synthesize the statistics of the common answers among responders. The demographic data were also input into the spreadsheet to identify any themes or patterns among participant’s responses based on demographic variables (Eliot & Associates, 2005). The recording was deleted after the study was complete. The outline, themes, and any quotes used in the
study do not divulge any specific details regarding the participants or their industries. The participants are identified by participant id and grouped by demographic or response similarities only. Only the researcher and the faculty sponsor know all personal information including the participant’s names and companies. The demographic data sheets were destroyed once the study was complete along with any additional notes from recruiting the participants and prior communication with the focus group members.

Similar to other qualitative studies done on the status of Gerontology programs in Academia (Meyer, 2003; Turner, 2002), utilizing surveys or focus groups, the researcher summarized and generalized the data based on specific responses to come up with themes. The results of the focus groups and surveys supported a descriptive analysis with some quantitative pieces to it (demographics). Additionally, as Moore noted in his analysis of interview data in summarizing the results of curriculum restructuring and its effectiveness in South Africa,

“I tended to draw more heavily from some interviews than others: as is usual, some interviews yield richer data than others, often because the individual has played a leading role in the processes under discussion, or because some colleagues are more articulate about social processes than others” (2003, p. 309).

The sorted data were used in developing the marketing plan, contributing to the strength or weakness of the specific industries in employing Gerontology graduates. The skills, qualities and qualifications recommended (questions 4 and 7) were compared with the Association for Gerontology in Higher Education’s (AGHE) Competencies in order to ensure that what the participants would look for in a potential employee would be met
in a Gerontology undergraduate. The data also were able to track whether there was any change between whether Gerontology would fit in the participant’s specific industry (question 2) and additional disciplines that were recommended to pair with Gerontology. The data collected were able to help shape not only the overview of the industry in the marketing analysis, but helping to identify the specific target market, potential barriers to entry, as well as an idea of projections. The literature review data paired with the collected quantitative data strengthened the marketing analysis and recommendations for practice.

Summary

In summary, the purpose of this study was to explore, assess, and conclude whether there is a job market for a graduate with an undergraduate degree in Gerontology in the semirural/semi semirural areas of Northern California. Focus group(s) were the primary method of data collection with recruitment occurring via expert and chain referral sampling, from varying industries in the community. The focus group(s) sought to measure the knowledge and industry responses to hiring a graduate with a Gerontology degree. There was also discussion on the perceived interdisciplinary role of a Gerontology degree. The data are preliminary and were anticipated to be mostly qualitative or descriptive. The researcher expects trifold application. First, to gather information in creating a market analysis of the current industry for a Gerontology graduate. Second, assist potential Gerontology students in selecting Gerontology as their major with the hope and data to back job security in varying multidisciplinary opportunities. Third, the data gathered aims to assist academia in the potential addition
and growth of Gerontology undergraduate degree programs, specifically in Northern California.
Chapter 4

PROJECT EVALUATION ANALYSIS

Introduction

As the age profile of the United States shifts toward the aging population, millions of Silent Generation and Baby Boomer cohorts will adjust and change the landscape of the Gerontology industry, as we know it today. Gerontology, simply defined, as the study of aging, is an academic field and discipline that is growing in the Northern California arena. As graduates are moving into the workforce with an interdisciplinary undergraduate degree in Gerontology, this study sought to verify the marketability of job placement in both the direct field of Gerontology and multidisciplinary fields. In chapter one, the project was introduced, including the purpose, rationale, significance, and description of the study along with definitions of terms. Chapter two presented the literature review covering both the supply and demand aspects of this study, including a review of the status both in academia and in industry. In chapter three, the project overview, including the methodology and implementation of the project as well as the intended process for data collection and analysis. Chapter four now includes the evaluation and analysis of the project itself. Chapter four covers first an overview of the data collection and analyzing process, then deals with effectiveness or ineffectiveness of the project in meeting intended objectives, limitations of the project, and recommendations for practice and conclusions. It also addresses these issues as outlined by the main research questions and its sub questions. The project itself, the Market
Analysis of the Gerontology industry for interdisciplinary undergraduates in rural Northern California is in the appendices (Appendix E).

Data Summary

The chain referral or snowball referral method of sampling was utilized in recruiting focus group members and participants for the study (Fullerton, Lee, Lim, & Sadler, 2010). Through the initial expert and chain referral method, there were nine identified local industries of interest within the researcher’s realm of study. Upon reaching out to the immediate network, 15 different careers were identified and sought out within those nine industries. Some of the careers/roles had multiple individuals referred to and recruited for the purposes of the study. A chart summarizing these industries and careers follows.

Table 4: Recruited Industries and Careers

<table>
<thead>
<tr>
<th>Industries</th>
<th>Careers/Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gambling</td>
<td>Administration, Marketing</td>
</tr>
<tr>
<td>Higher Education</td>
<td>Director of Adult Degree Completion</td>
</tr>
<tr>
<td>Caregiving</td>
<td>Care Management, Familial Caregiver</td>
</tr>
<tr>
<td>Fitness</td>
<td>Personal Trainer</td>
</tr>
<tr>
<td>Medical</td>
<td>Doctor, Nurse</td>
</tr>
<tr>
<td>Housing/Construction</td>
<td>Design, Community Management, Architect, General Contractor, Planning/HOA</td>
</tr>
<tr>
<td>Advocacy/Ombudsman</td>
<td>A4A Director</td>
</tr>
<tr>
<td>Legal</td>
<td>Elder Law</td>
</tr>
<tr>
<td>Financial</td>
<td>Investor</td>
</tr>
</tbody>
</table>

Upon conclusion of the chain referral and data collection process, through analyzing the demographic data, five industries were covered within the six participants of the study. The following is the demographic data of the respondents.
Table 5: Demographic Data

<table>
<thead>
<tr>
<th>Participant</th>
<th>Industry</th>
<th>Age</th>
<th>Gender</th>
<th>Knowledge</th>
<th>Time Worked with Older Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No Response</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Construction/Housing</td>
<td>51-60</td>
<td>Female</td>
<td>Beginner</td>
<td>16 years</td>
</tr>
<tr>
<td>3</td>
<td>Other: Fitness</td>
<td>under 30</td>
<td>Female</td>
<td>Novice</td>
<td>0 years</td>
</tr>
<tr>
<td>4</td>
<td>Healthcare</td>
<td>under 30</td>
<td>Female</td>
<td>Proficient</td>
<td>3 years</td>
</tr>
<tr>
<td>5</td>
<td>Other: Administer</td>
<td>51-60</td>
<td>Female</td>
<td>Proficient</td>
<td>1 year</td>
</tr>
<tr>
<td>6</td>
<td>Construction/Housing</td>
<td>51-60</td>
<td>Female</td>
<td>Competent</td>
<td>2.5 years</td>
</tr>
<tr>
<td>7</td>
<td>Education</td>
<td>51-60</td>
<td>Male</td>
<td>Competent</td>
<td>8 years</td>
</tr>
</tbody>
</table>

For the knowledge of Gerontology, the participants self-identified themselves on the scale of novice to proficient based on subjective analysis of personal knowledge. The amount of time the respondents worked directly with older adults ranged from no time (n=1) to 16 years (n=5) with the average time being 5.08 years. The capacity with which the varying respondents worked with older adults varied from serving on a homeowner’s association board at a 55+ community to being a doctor who works with all ages of patients, including the aging adult population.

Effectiveness/Ineffectiveness

The researcher found that there were both effective and ineffective aspects of the study through conducting the research, data collection, and analysis. The following includes some of the specific effective and ineffective methods of recruitment, collection,
and analysis. Some of the effective methods included the implementation of job market signaling throughout the project by the researcher, and the overwhelmingly positive responses from the participants. Some of the ineffective methods included the low number of focus groups and individual participants, and the lack of variation in roles and backgrounds of the participants.

First, the researcher found that in recruitment and focus group discussion, the Job Market Signal Theory was implemented unintentionally. The researcher found that in the process of gathering focus group data, signaling was used to trigger and provoke discussion among participants. It is also noted that the varying focus group members also participated in signaling, whether consciously or not in generating richer discussion and spurring additional application. In the process of gathering data from focus group members, the researcher found that signals of gerontology application, definitions of terms and probing questions (Eliot & Associates, 2005) were used to communicate and identify what an interdisciplinary Gerontology graduate would have knowledge of based on the degree program. Signals or Signaling, as defined in chapter one refers to things that one does that are visible and that are in part designed to communicate. They are alterable attributes that a potential employee uses to communicate productivity to a potential employer in order to make themselves more marketable (Spence, 2001). Michael Spence’s (1973) Job Market Signal Theory addresses this concept and its application in detail and provides the theoretical basis for the project. This method of communicating potential productivity was found most effective and was an unintended positive result of the study itself.
The project proposed that the field of Gerontology is growing and that a person with an interdisciplinary undergraduate Gerontology degree would be able to find a job in multidisciplinary fields. The data collected confirmed such notion in overwhelming affirmation. This may be due, in part, to the researcher’s implementation of Job Market Signaling in education and probing participants to think ‘outside the box’ in relation to how Gerontology applies to any specific industry. One of the markers of this change in mindset or application is a comparison of participants’ responses to question two “Could Gerontology apply to your industry? Why or Why Not?” question five “I would hire a person with a Gerontology degree to...”, and question 8 (added probing question) “what additional disciplines would you pair with Gerontology?”. See the summarized responses below:

Table 6: Questions 2, 5, and 8 Comparison

<table>
<thead>
<tr>
<th>ID #</th>
<th>2. Could Gerontology apply to your industry? Why or why not?</th>
<th>5. I would hire a person with a Gerontology degree to...</th>
<th>8. What additional disciplines would you pair with Gerontology?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No Response</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Yes. Absolutely. Manage an active adult community, fitness instructor</td>
<td>Financial, Business, Fitness, Social Work, Nursing, Family Counseling</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Yes Oversee specialized fitness classes</td>
<td>Public Health, Policy, Law, Communications, Science, Pastoral, Health</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Yeah, it does Any place where there are geriatrics</td>
<td>Nursing, Medicine, Social Work</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Yes Be a program manager, do outreach</td>
<td>Did not ask</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Yes Activities</td>
<td>Activities, Executive Director, Advertisers, Fitness</td>
<td></td>
</tr>
</tbody>
</table>
It is interesting to note that all of the respondents who were asked to add additional disciplines were able to come up with multiple, varied, fields or disciplines with which to pair Gerontology. Most of the participants were also able to see how Gerontology could apply to their industry immediately. The most notable response change was respondent seven who did not see how Gerontology could apply and by the end said when asked what disciplines it could be paired with “I don’t know that it’s limited”. These three questions alone, suggest the power of Job Market Signaling in recommending or marketing the strengths of a program or skill set in application to multiple fields.

Some of the areas of ineffectiveness for the study include the low number of focus groups, low number of participants in total as well as the lack of variation in role and background of participants. One of the ineffective aspects of the study is the low number of participants included in the study. The researcher reached out to known experts in the field to receive referrals of individuals and careers in the Placer/Sacramento region. Of the many referrals received and reached out to, a few responded positively but were not able to meet or could not make the focus group times set up. Of the 20 individuals reached out to and referred, only six were able to participate in the study. There were two focus group times set up with four of the six respondents able to meet during those times. The first group was two participants and the second group only had one participant as the second one forgot the time. The researcher was able to connect with the second
participant at a later date for an interview. One of the remaining two was able to meet individually for an interview and the last participant was not able to meet in person but was able to complete the survey and questionnaire via mail. The most successful interview was the focus group as it was clear that the participants were able to feed off one another’s answers, allowing for deeper thought and conversation on each topic. In the interview-style meetings, the participants answered the questions but not much more discussion occurred. All of the interviews were more effective than the survey via mail as even in the interviews, the additional probing questions were able to be asked along with more explanation of answers.

One of the recommendations for future studies would be to have a larger recruitment strategy with more participants reached. Perhaps starting with a larger list of experts in the field to ensure a higher number of participants. When looking at the rate of participation, 30% is not a bad rate; however, the sample number is too low to draw any strong conclusions. Another recommendation would be to offer more focus group times so that the participants are not so limited with the selection of focus group options. This would have worked if more participants were invited so that each focus group could have enough participants. Additionally if the participants were contacted earlier and given more notice ahead of time, the response rate may have been improved. For future studies, recruiting more people, to more focus group times, and inviting them earlier would mediate many of the ineffective methods of this study.

Another ineffective facet of the study was the lack of variety in participant role and background. The goal was to get many differing industries and careers and the study
was only able to meet five of the nine industries anticipated. The demographic data also shows that the participants were mostly women (5 of 6), and there were only 2 age groups represented (4 in 51-60, and 2 under 30). These demographic factors were not noted until analysis was being conducted, but in future studies, it is recommended to reach additional age groups with a more even sample of men and women as well as a wider variety of roles within more varied industries.

Limitations

Chapter one addressed general limitations of the study being specific to Northern California as well as only to undergraduate degrees. Despite the fact that these factors limited the study as far as research and data collection were concerned, the limiting factors allowed the researcher to be specific and detailed in the data collection and analysis. These limitations, in fact, seemed to assist the research in being direct and focused, applicable to a very specific market.

The major limiting factor of the data collection is that of the low participation rate of only six participants. This limitation pushes the researcher to conclude that this study is only a pilot study of primary data and does not allow the researcher to draw any strong conclusions. This study represents merely a specific facet of the Gerontology industry globally, nationally, and even locally. The conclusions can only be applied to local careers/roles within the industries studied, although, some general patterns and themes were discovered that would suggest the application of Gerontology to all industries pursued and possibly all industries globally. Although small, the respondents are a good indicator of what would be expected for future studies. Further research is recommended
Conclusions and Recommendations for Practice

Concluding remarks and recommendations for practice include a review of the initial research question and its sub-questions with answers from both the literature reviewed as well as the data collected. The main research question was:

1. As interdisciplinary gerontology graduates seek employment in varying fields of study, are there companies, industries, or individuals who are looking for a specific skill set to meet the needs of the growing aging population?

In addressing the answer to this question, the growth of the Gerontology industry in academia as well as the data collected on the specific skill sets needed to be employable by the focus group participants presents a resounding affirmation. Many of the skills/qualities and qualifications the focus group participants would look for in hiring a Gerontology graduate are incorporated into the Association of Gerontology in Higher Education’s (AGHE) Competencies for degree programs (Association for Gerontology in Higher Education, 2014). Per the data collected, industries would be looking for the following skills in any person they hire or more specifically in Gerontology graduates:

- hospitable/people person
- adaptable/flexible
- specialization
- hard workers
- professionals
- team players
- passionate
- compassion/kind/empathy
- strong interpersonal skills
- communication
• knowledge of Gerontology
• observation skills

Building on earlier Gerontology competencies, The Association for Gerontology in Higher Education (AGHE) has created Gerontology Competencies for any Gerontology Program to allow for consistency among degree programs (2014). These competencies range and vary with differing degree programs but are all categorized in three major sections, foundational competencies, interactional competencies, and contextual competencies. When comparing the sought after skills collected in the data to the competencies, it becomes clear that a Gerontology graduate from an AGHE sponsored university would be competent in many of the skills/knowledge necessary for work in these studied industries. Many of these qualities are soft skills but the competencies speak to this piece with specific competencies focused on communication, ethics and professional studies, social/community awareness, and the psychology of aging (Association for Gerontology in Higher Education, 2014). There is also a piece that is learned by practice and involvement through an internship or hands-on learning, which is a required part of most Gerontology degree programs.

The main research question has two variables that correlate to the basic economic model of supply and demand. Each has its own set of sub-questions to address. The first is the supply of interdisciplinary undergraduate Gerontology graduates and the second is, the demand for knowledgeable, skilled employees in the existing markets.

2. What is the supply of Gerontology Graduates?
   a. What are ways that gerontology majors can blend ‘standard’ industries with an interdisciplinary academic background in gerontological studies?
b. If a student paired gerontology with another discipline, creating a multidisciplinary undergraduate degree, does his/her Bachelor’s degree become more marketable?

c. How can an undergraduate Gerontology graduate seek to become more attractive in the marketplace?

The idea of the supply of Gerontology graduates and the interdisciplinary and multidisciplinary potential in application in a variety of industries as well as the marketability of such degrees has also been answered with a resounding ‘yes’. By applying the Job Market Signaling Theory, Gerontology graduates are able to blend ‘standard’ industries with their background in Gerontological studies. The interdisciplinary nature of the Gerontology undergraduate degree, allows for such blending with unlimited ‘standard’ industries. For many universities that do not have the need or resources to create a full gerontology program, the AGHE, in their fall 2013 newsletter, published an article regarding getting a gerontology program started. Kruger and Karasik (2013), Gerontology professors, presented the idea of infusing gerontology concepts into the general education courses. The suggestion was to insert one or two gerontology courses into the core general education requirement for all students. The authors defined general education as “developing a set of key skills useful for functioning in one’s family, career, and society (p. 2). They go on to further discuss the aging process as one that “warrants attention in higher education….studying aging can help develop the life skills deemed useful regardless of a major” and “gerontology courses can be tailored (or created) to meet many of these knowledge and skill objectives” (p. 2). In creating
awareness and exposure to gerontology, the hope is that students would desire to study
gerontology and in so doing, create the need for a program. The idea of slowly infusing
Gerontology coursework into alternate discipline curriculum additionally allows
Gerontology to be connected with a variety of disciplines in both an interdisciplinary and
multidisciplinary fashion. Simply be beginning to integrate Gerontology into specific
courses, multidisciplinary growth occurs. Other reports have also recommended
gerontology move from a general field to a more specialized one, meeting the needs of
varying interdisciplinary fields such as Gerontology and Fitness or Gerontology and
Marketing and other varying business aspects. There are also recommendations to grow
gerontology programs in the online and international platform. (Association for

When looking at the third piece regarding the supply and how a graduate can become
more marketable in the workforce, the Theory of Job Market Signaling applies to this
challenge. The concept of ‘signaling’ marketability to potential employers has proven
especially necessary when involved with an industry that does not directly relate to
Gerontology but where Gerontology can apply, creating an understanding of the need.

The second variable is that of demand of jobs/industries where a Gerontology
graduate is concerned.

3. What is the demand in the industry for Gerontology graduates?
   a. Is there a supply of jobs for an undergraduate gerontology major?
   b. How are the changing physical, emotional, physiological needs of the aging
      population addressed and met without lifestyle, quality, or situation changes?
c. Are mainstream industries adapting their hiring, training, or marketing strategies to better suit the age wave?

d. How does the application of an interdisciplinary Gerontology degree allow for job and industry development in any multidisciplinary field?

The findings were not wholly positive when researching and addressing the demand of a Gerontology graduate within varying industries. Despite the researcher’s findings that each participant was able to recommend multiple disciplines that would easily pair with Gerontology, the researcher had to participate in Job Market Signaling in order to solicit a positive response and begin to suggest thinking of Gerontology outside of the typical Geriatric industries. See recommended industries below:

**Table 7: Question 8: What additional disciplines would you pair with Gerontology?**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Participant Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
<td>2</td>
</tr>
<tr>
<td>Business</td>
<td>3</td>
</tr>
<tr>
<td>Fitness</td>
<td>2</td>
</tr>
<tr>
<td>Public Health/Nursing</td>
<td>4</td>
</tr>
<tr>
<td>Social Work</td>
<td>3</td>
</tr>
<tr>
<td>Public Policy/Law</td>
<td>2</td>
</tr>
<tr>
<td>Communications/Advertising</td>
<td>2</td>
</tr>
<tr>
<td>Religion/Spirituality</td>
<td>2</td>
</tr>
<tr>
<td>Recreation/Tourism</td>
<td>2</td>
</tr>
<tr>
<td>Family Counseling</td>
<td>1</td>
</tr>
</tbody>
</table>

What was seen in the data overall was that there is opportunity in varying industries for gerontological application. As seen in the answers to question eight as outlined in table seven, many varying disciplines, different than the ones the participants were employed were recommended as disciplines that could be paired with Gerontology. Multiple participants mentioned all but one of the disciplines (family counseling), and
nursing/public health was mentioned by four participants. The data provide evidence that when prompted and educated on what Gerontology is and how a graduate could apply the degree, participants in various industries were able to recognize Gerontology’s potential for application in many varying industries and disciplines.

The common thread seems to be education and informing individuals of the need for employees with knowledge and skills in dealing with the aging population. It may be that in Academia, Gerontology is ahead of the demand curve; however, as soon as there is more demand, the supply may not be sufficient. As mentioned throughout the study, the Baby Boomer cohort is aging and desiring to maintain a similar standard of living that requires potential adaptation and adjustment in every facet of life. Skilled Gerontologists can meet these needs.

Here in lies the challenge for gerontologists across the globe. How are the changing physical, emotional, physiological needs of the aging population addressed and met without lifestyle, quality, or situation changes? What are ways that gerontology majors can blend ‘standard’ industries with an interdisciplinary academic background in gerontological studies? The implementation of a core curriculum as well as accountability via the competencies will be immensely effective in educating graduates and meeting the needs of the aging population. The demand exists and may not always be felt, but can often be revealed to promote the application of interdisciplinary gerontological knowledge to multidisciplinary industries.

In conclusion, the research questions were introduced, literature reviewed, hypotheses set, data collected and analyzed, and conclusions and recommendations
drawn. Despite the descriptive nature of the study with a limited sample, there is a good indication, based on the data and research, that due to the growth in both the demographics and degree programs in Gerontology, there is a viable, sustainable job market for an interdisciplinary Gerontology graduate, at the undergraduate level, in semirural areas of Northern California.
Appendix A: Institutional Review Board Approval

Institutional Review Board (IRB)
(PWA# 00003873)

November 25, 2013

PROTOCOL # 13-14-063

To: Ms. Elizabeth Near
3333 Sunset Blvd., Rocklin, CA 95765

CC: Dr. Cheryl Osborne
Department of Gerontology
College of Social Sciences and Interdisciplinary Studies (6132)
Committee for the Protection of Human Subjects/IRB

RE: A Pilot Study of Marketability and Job Placement for Interdisciplinary Gerontology Graduates at the Undergraduate Level in Rural Areas of Northern California

Your protocol application has been approved as "Exempt." The exemption is made pursuant to 45 CFR 46.101(b)(2). The approval applies to the conditions and procedures described in your protocol. Your approval expires on November 24th, 2014. If you wish to collect additional data after that time, you will need to request an extension. For additional information, see "Continuing Review" in the IRB Policy Manual.

The approval applies to the research as described in your application. If you wish to make any changes with regard to participants, materials, or procedures, you will need to request a modification of the protocol. For information about doing this, see "Requests for Modification" in the IRB Policy Manual.

Should you need further information about the protection of human subjects, please consult our website at http://www.casu.edu/research/humansubjects/or contact the IRB Office at 916-278-3657.
Appendix B: Focus Group Questions

Focus Group Questions

Engagement Questions
1. When you think of Gerontology, what one word, phrase, or experience comes to mind?

Exploration Questions
2. Could Gerontology apply to your industry? Why/Why not?
3. Does Gerontology fit within your specific organization? If so, how? If not, why?
4. What qualities/qualifications does your organization look for in a potential employee?
5. Fill in the blank: “I would hire a person with a Gerontology degree to…” (answer can be personal or professional)

Exit Question
6. Is there anything else anyone would like to discuss regarding this topic?

*Additional Probing Questions
7. What skill set(s) would you like to see in a Gerontology graduate?
8. What disciplines would you pair with Gerontology?
Appendix C: Demographic Data Sheet

**Gerontology Job Market Focus Group Participant Demographics**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Time: N/A</th>
<th>Participant ID #:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>What is your industry?</th>
<th>Your Age:</th>
<th>Rate your knowledge of Gerontology?</th>
<th>Have you ever worked with adults 60 +?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>under 30</td>
<td>Novice</td>
<td>No</td>
</tr>
<tr>
<td>Consulting</td>
<td>31-40</td>
<td>Beginner</td>
<td>Yes</td>
</tr>
<tr>
<td>Policy</td>
<td>41-50</td>
<td>Competent</td>
<td>How Long? __________</td>
</tr>
<tr>
<td>Healthcare</td>
<td>51-60</td>
<td>Proficient</td>
<td>What Capacity? __________________</td>
</tr>
<tr>
<td>Construction/Housing</td>
<td>over 60</td>
<td>Expert</td>
<td></td>
</tr>
<tr>
<td>Caregiving</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casino</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other: ________________</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Your Gender:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
</tr>
</tbody>
</table>
Appendix D: Consent Form

Consent to Participate in Research

You are being asked to participate in research, which will be conducted by Elizabeth Near, a graduate student in the Gerontology Department at California State University, Sacramento under direct supervision of Dr. Cheryl Osborne, Gerontology Program Director. The purpose of this study is to explore the job market for a graduate with an interdisciplinary undergraduate degree in Gerontology in the rural areas of Northern California. The goal of this focus group is to assess the current marketability of a Graduate with a Gerontology Bachelors degree in your field. This information is important to research in regard to the possibility of adding Gerontology as an Interdisciplinary Degree Program at Private Universities.

You will be given a participant ID #, an anonymous demographic sheet, and asked to participate in a focus group consisting of approximately 5-7 questions. Your demographic sheet can be filled out with circles or checks and should take no longer than 3-5 minutes. The demographic sheet will be turned into Elizabeth Near and she will analyze the data along with the focus group responses. The focus group discussion will cover your company’s knowledge of Gerontology, as well as any potential area you see as a fit for a graduate with a Gerontology degree. The focus group discussion will be tape-recorded, transcribed, and analyzed by Elizabeth Near following the focus group discussion. Your signature on this consent form signifies your consent to be audio-taped.

This procedure is safe and poses no risk to the participants.

You may personally benefit from participating in this research. The topics discussed could allow for a shift in your company’s knowledge of, desire for, and pursuit of employees with a degree in Gerontology. You will receive no direct compensation for participating in this study.

Your responses will be kept confidential and will only be segregated by the demographic factors listed (ie industry, age, gender etc). The data collected will be reported in aggregate, with no identifiers to segregate any individual. Your participation in this study will be kept confidential as no personal names or names of companies will be listed in this study. Your responses will be destroyed after the study is completed. The results of the study will be shared with the Gerontology community and may become a matter of public record.

If you have any questions about this research, you may contact Elizabeth Near at [redacted] and em2479@csu.edu, or Cheryl Osborne at 916.278.7281 and osbornec@csu.edu.

You may decline to be a participant in this study without any consequences. Your signature below indicates that you have read this page and agree to participate in the research.

______________________________          ________________
Signature of Participant          Date
Appendix E: MARKET ANALYSIS OF GERONTOLOGY INDUSTRY FOR INTERDISCIPLINARY UNDERGRADUATES IN SEMI-RURAL NORTHERN CALIFORNIA

Executive Summary

The current Gerontology industry is a growing field. As the demographics shift toward an aged society, Academia has responded, distinguishing Gerontology as a distinct discipline (Lowenstein, 2005), allowing an interdisciplinary Gerontology Degree to be applicable in many multidisciplinary fields. The marketability and job placement of an interdisciplinary Gerontology graduate in multidisciplinary fields in semi-rural Northern California exists, despite lack of felt need and cost of education as barriers to entry. The projections are strong with 20% of the whole market expected to be over 65 and the barriers easily overcome with education and implementation of Job Market Signaling Theory. Overall, the Market Analysis supports a growing market with few barriers and huge potential for growth.

Overview of Industry

The Gerontology industry is a strong and growing field that is rapidly expanding into many multidisciplinary industries. This industry growth is anticipated to continue due to the demographic shift of 70 million Baby Boomers entering aging adulthood in the coming years. As the Baby Boom cohort joins the Silent Generation cohort in older adulthood, the needs and opportunities are expected to abound. Globally, it is estimated in 2013 that of the world’s population, 8% or 572 million people were over 65. By 2050,
it is estimated that 20% of the US’s population will be over 65 and in Placer County, it is estimated that by the end of 2015, 43% of the population will be over 50.

Not only are there going to be exponentially more aging adults, it is expected that they will desire to age differently than any generation before them. As one author put it the (Baby Boomers) will demand – and respond to – products and services that help them maintain their active lifestyles and activities, flexible scheduling, continuing education, travel, intellectual and stimulating experiences, and opportunities for companionship…Boomers will move to the mountains, beaches, islands, college towns – where the physical and intellectual actions is…half of them will expect to work at least part-time once they retire and they’ll want offices in their homes – with high-speed internet connections for those with two or more computers (Transgenerational Design, 2009).

Robert Butler, one of the founding fathers in the research of Gerontology speaks to the need to adapt the industries to meet the varying needs of the new older adults (Butler, 2008). Additional research speaks to the fact that the aging population will also have the funds to pay for aging as they choose. “Americans over 50 control 70% of the nation’s wealth” (Butler, 2008 p.13).

Academia has already begun to respond to this demographic shift globally, nationally, and locally as colleges and Universities are creating and expanding Gerontology programs to meet social and environmental needs. Specifically in Northern California, CSU Sacramento’s enrollment in the Interdisciplinary Gerontology program
has increased rapidly over the last 2 years with a total enrollment for fall 2015 at 240 students.

The opportunity for a Gerontology graduate with an interdisciplinary degree abounds in varying industries as the market adjusts to this demographic shift. With the emergent growth of this market, the window of opportunity is primed and ready for knowledgeable, skilled, graduates. Per the data collected, industries would be looking for the following skills in any person they hire or more specifically in Gerontology graduates:

- hospitable/people person
- adaptable/flexible
- specialization
- hard workers
- professionals
- team players
- passionate
- compassion/kind/empathy
- strong interpersonal skills
- communication
- knowledge of Gerontology
- observation skills

The Association for Gerontology in Higher Education (AGHE) has created Gerontology Competencies for any Gerontology Program to allow for consistency among degree programs. These competencies range and vary with differing degree programs but are all categorized in three major sections, foundational competencies, interactional competencies, and contextual competencies. When comparing the sought after sills collected in the data to the competencies, it becomes clear that a Gerontology graduate from an AGHE sponsored university would be learned in many of the skills/knowledge
necessary for work in these studied industries. Many of these qualities are soft skills but the competencies speak to this piece with specific competencies focused on communication, ethics and professional studies, social/community awareness, and the psychology of aging (Association for Gerontology in Higher Education, 2014). Many of these skills are soft skills, things learned by practice and involvement through an internship or hands-on learning, which is a required part of most Gerontology degree programs.

Overall, the industry seems to be strong and growing with the demand for knowledgeable experts in the field available to many multidisciplinary industries and the supply of Gerontology graduates to be growing in the semi-rural Northern California Region.

Target Market

The target market for the purposes of the study include any business or industry that relates to older adults in semi-rural Northern California. The demographics of the aging population in California are such that by the end of 2015, 36% of Californian’s will be over 50. As mentioned earlier, in Placer County, by the end of 2015, 43% of residents will be over 50. This makes the local target market a more dense market than California as a whole. Americans over 50 also will have the finances to pay for specialized multidisciplinary services as those over 50 hold 70% of the wealth in this country. This demographic data paired with the descriptive, qualitative data collected via the study, confirm and extend the possibilities of application for a graduate with such a degree.
Some of the multidisciplinary disciplines recommended through data collection and research include:

- Financial
- Business
- Fitness
- Public Health/Nursing
- Social Work
- Family Counseling
- Public Policy/Law
- Communication/Advertising
- Religion and Spirituality
- Recreation/Tourism

Barriers to entry

Some of the barriers to entry for multidisciplinary industries include communication need to the specific industry and as well as the cost of education. Both of these barriers are addressed in Michael Spence’s theory of Job Market Signaling. Spence deals specifically with the cost of education as an example of a ‘signal’ or means of which a potential employee would communicate productivity to an employer. In the case of Gerontology, a Gerontology graduate has paid the cost of education in order to communicate or ‘signal’ specific knowledge or skill sets to an industry that may not initially think of Gerontology as a good fit. In order to communicate need to the target market or industry, graduates with a Gerontology degree may need to ‘signal’ to potential industries the richness of their specific knowledge within the local market locally that can be tapped by bringing on an employee who specializes in the knowledge of this very population. A graduate with such degree/skills may need to market themselves to inform a particular industry or market why they are the best fit for the job.
Projections

As the demographics continue to shift upward in the United States, the projections for need of Gerontology graduates is growing. With 70 million Baby Boomers over 65 by 2050, the need exists and continues to increase. One-fifth (20%) of the market will be adults over age 65 who will also house the majority of the funds in the United States. The projections for interdisciplinary Gerontology graduates, especially applying the knowledge to multidisciplinary fields, is expected to increase.
References


Association for Gerontology in Higher Education. (2014). *Gerontology Competencies for Undergraduate and Graduate Education*.


http://www.thefreedictionary.com/nonacademic


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http://quickfacts.census.gov/qfd/index.html


http://www.hhs.gov/ohrp/policy/checklists/decisioncharts.html#c4