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AN EXAMINATION OF MARKETING FACTORS THAT INFLUENCE NONTRADITIONAL COLLEGE STUDENT ENROLLMENT DECISIONS

by

Jianping Landrum

A Dissertation

Submitted to the Faculty of Purdue University

In Partial Fulfillment of the Requirements for the degree of

Doctor of Philosophy

Department of Technology Leadership and Innovation

West Lafayette, Indiana

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This dissertation is dedicated to my parents who have been so loving and supportive
and to my sons, Teagan, Tyeson, and Jaydan Landrum,
who have filled my life with love, joy, and laughter.

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LIST OF ABBREVIATIONS

Branding – "---a sets of assets (and liabilities) linked to a brand's name and symbol that adds to (or subtracts from) the value provided by a product or service to a firm and /or that firms customers. "Brand name awareness, brand loyalty, perceived quality, and brand association" are the major asset categories (Aaker, 1997, pp.347-356).

Interest in pursuing a higher education – one's excitement, willingness, and plans to pursue a post-secondary degree in the future.

Marketing – Marketing is about thinking and developing the business in terms of customer needs and customer's satisfaction. Marketing is not sales. Theodore C. Levitt, a Harvard Business School retired marketing professor in 1981 said that: "Selling concerns itself with the tricks and techniques of getting people to exchange their cash for your product. It is not concerned with the values that the exchange is all about. And it does not, as marketing invariably does, view the entire business process as consisting of a tightly integrated effort to discover, create, arouse and satisfy customer needs." In other words, marketing has less to do with getting customers to pay for your product than it does to developing a demand for that product and fulfilling the customer's needs.

Marketing Mix – refers to 7Ps: product, price, place, promotion, people, process, and physical evidence.

Nontraditional students – Many researchers summarized the characteristics of nontraditional students as the following:

- being independent for financial aid purposes;
- having one or more dependents;
- being a single caregiver,
- not having a traditional high school diploma;
- delaying post-secondary enrollment;
- attending school part time; and
- Being employed full time (Brock 2010; Choy 2002; Horn 1996; Kim 2002; Taniguchi and Kaufman 2005).

ABSTRACT

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Title: An Examination of Marketing Factors that Influence Nontraditional Student Enrollment Decisions
Committee Chair: Linda Naimi

The purpose of this study was to examine marketing factors that influence the decisions of working professionals to enroll as nontraditional students in the University of their Choice. Research has shown that factors such as affordability, access, and availability matter to nontraditional students. Marketing campaigns have often focused on these three factors, perhaps to the exclusion of other factors that may be equally important and compelling in helping working professionals decide to return to college for an advanced degree. This research explored seven marketing mix factors (Price, Promotion, Physical Evidence, People, Product, Process, and Place) and the extent to which they influenced decisions and choices made by nontraditional college students.

The sample for this research consisted of professionals employed by companies affiliated with Oerlikon Fairfield Manufacturing, Oscar Winski manufacturing, and Thyssenkrupp Sorting Company. A pilot study was conducted with a small representative sample to clarify and refine questions, and thus, enhance the validity and reliability of the survey instrument. A hard copy of the survey was distributed by the Human Resources Department in each company to approximately 300 employees. Factor analysis and other analytical tools were used to identify those factors that influenced the perceptions and choices made by nontraditional students. This research presented recommendations for improving marketing strategies that target nontraditional students.

CHAPTER 1. INTRODUCTION

This chapter provides a basic overview of this research project, including the discussions as to the scope, purpose, and significance of the study. Also, included in this chapter are the definitions that will be used in the study, the research questions that guided the study, and assumptions, limitations and delimitations of the proposed research.

1.1 Background and Scope

As a land grant institution of higher education, Purdue University is committed to serving the "citizens of Indiana, the United States, and the world" through learning, discovery and engagement, and to play a leading role in Indiana's social, economic and workforce development (Retrieved from https://www.purdue.edu/strategic_plan/2001-2006/pages/westlafayette/ wl_mission.html).

To meet the needs of a changing nation and world, Purdue has taken significant steps to transform its colleges, schools, departments, and programs. One of the more significant areas of transformation has been the transition and renaming of the College of Technology to the Purdue Polytechnic Institute, a college "that uses innovative learning methods, real world experiences, and industry partnerships to produce graduates uniquely qualified for technology-driven careers" (Retrieved from https://polytechnic.purdue.edu/ about). As a new organizational unit within the university, the Polytechnic has been engaged in several marketing campaigns to increase enrollments of both traditional and nontraditional students. While enrollments are generally on the rise among traditional undergraduate and graduate students, the Polytechnic is focused on increasing and sustaining enrollments of nontraditional students. This research explored how marketing factors influence the decisions and choices of nontraditional students to enroll in higher education programs.

The researcher has nine years of professional experience in marketing and supply chain business management. She has worked with numerous groups on market strategy, communication and negotiation, and analysis of consumer buyer behavior and information analytics. Concurrently, as a graduate research assistant in the Polytechnic Institute at Purdue University since 2010, the researcher worked with cross-functional teams and with deans of

other colleges engaged in workforce development. At the time of the writing of this dissertation, the researcher was also employed at Subaru of Indiana Automotive (SIA) as a Supplier Quality Engineer. As a nontraditional student, the researcher was also a working professional. She had strong marketing and project management skills, and worked extremely hard with diverse groups of people to purse her Ph.D. The author possessed a strong knowledge and understanding of marketing strategy and knew well from first-hand experience about nontraditional student perceptions and choices. She was confident in her ability to successfully execute this research project and activities and she was certain she would be an asset to perform this study.

Founded in 1986, Subaru of Indiana Automotive, Inc. (SIA), a subsidiary of Fuji Heavy Industries, Ltd, started as a joint venture by FHI and Isuzu in Indiana, United States. SIA is home to North American Subaru production, located in Lafayette, Indiana. This particular Indiana plant manufactures the Subaru Legacy and Outback, and HR3 modules. SIA has over 5,400 employees, providing quality, safety and environmental stewardship for customers. One of the author's major responsibilities at SIA was to evaluate and track supplier performance on quality, delivery, sorting cost on quality, social responsibility, etc.

The Purdue Polytechnic offered academic degree programs to employees at the Lafayette SIA site and through the Weekend Master's Program. SIA's suppliers represented nearly 200 small and medium sized companies. Information concerning how many of the employees of these affiliated companies were enrolled in a university or college degree program was uncertain. This research examined the extent to which the Polytechnic's marketing efforts influenced employees of several affiliated companies to enroll in advanced degree programs.

1.2 Significance

A recent report by the Indiana Department of Workforce Development (DWD) indicated that the state "needs to fill more than one million jobs over the course of the next ten years" (Retrieved from http://www.in.gov/dwd/). To meet this growing demand, the Indiana DWD created the *Skill UP Indiana* grant program in 2015, which provided "nearly $19 million in grant funding to support community partnerships in developing youth and adult education and training opportunities aligning with employer needs" (Retrieved from http://www.in.gov/dwd/). As a land grant institution, Purdue University had been working with business and industries to train a 21st

century workforce to offer a range of services and programs designed to meet the education, technical training, and advancement needs of employees and business leaders in Indiana.

While many studies have focused on recruitment and retention of traditional undergraduate and graduate students, research on adult learners and nontraditional students in higher education has been less well documented. Donaldson and Townsend (2007) stated that "despite these shifts in higher education practice, scholars have paid little attention to the adult students' presence and their impact upon nonprofit education" (p. 28). However, due to the "different characteristics of traditional and nontraditional students, the traditional education design does not fit nontraditional students' needs, which is the leading difficulty" in recruiting and retaining nontraditional students (Sims & Barnett, 2015, p. 1).

Marketing campaigns aimed at traditional undergraduate and graduate students did not appear to be as effective with nontraditional students whose needs and expectations often differ sharply from traditional students. For example, Aslanian and Clinefelter conducted a national survey using their Priorities Survey for Online Learners (PSOL) in 2013. In their findings, they reported that institutional reputation and price were the main drivers among nontraditional students for choosing an online program (Aslanian & Clinefelter, 2013). Noel-Levitz employed the Adult Student Priorities Survey (ASPS) in a national survey of nontraditional students and found access and convenience to be more important among students enrolled in online courses while cost, academic reputation, and convenience were cited as the most important factors for all nontraditional students. (Noel-Levitz, 2012; Retrieved from www.noellevitz.com/Factors2012).

Businesses today are trying to position themselves for success in a highly competitive global marketplace. Universities face many of the same obstacles and goals. In higher education, the current student population is far different compared to a decade ago. Changes in technology, the challenges and opportunities of a global economy, and changes in society have forced institutions of higher education and business and industries to re-examine the preparedness of our nation's workforce to meet the challenges of the 21st century. Higher education is striving to meet emerging demands with more online courses, blended (hybrid) courses, and customized plans of study, weekend graduate programs, accelerated academic degree programs and certificates, onsite courses, and multidisciplinary programs with internships, field work, and project-based learning to engage the student in active, applied learning. And, both institutions of

higher education and businesses are spending millions of dollars on marketing campaigns to develop highly educated, technically proficient leaders, innovators, and practitioners.

In this case, one size does not fit all. Marketing strategies and program offerings that appeal to traditional students may not appeal to the nontraditional market. Therefore, institutions need to rethink their marketing strategies to capture this large population of adult learners.

This gives rise to many questions. What are the antecedents of satisfaction with higher education programs? What criteria are most important in influencing whether working professionals pursue advanced degrees? What factors turn prospective nontraditional students away? What role does university loyalty play in these decisions? These are some of the issues that draw the attention of HEIs while many changes are taking place that redefine the relationship between the nontraditional student and their institute - especially among nontraditional students in the workforce.

Universities and colleges recognize that the enrollment shift to capture the nontraditional student market has become more aggressive to enhance its revenue stream, visibility, reputation, and stability in a very competitive, highly unstable market (Clauss-Elhers & Parham, 2014, p. 69). This raises several questions. What can the institution do to provide better service to attract nontraditional students to enroll in the university? What kind of activities should a marketing group initiate to target this specific group? What would a successful marketing strategy look like?

Understanding the marketing mix factors that are most effective with the nontraditional student may help college leaders in developing programs and marketing strategies that appeal to nontraditional students. This research adds to the existing literature on how to increase recruitment and retention of nontraditional students in higher education programs.

1.3 Statement of Purpose

The purpose of this study was to identify factors in a marketing mix that influence nontraditional student decisions to enroll and the choices they make regarding programs and institutions. This research explored a 7P marketing mix, based on the historical/traditional marketing mix from product, price, place and promotions (4Ps), to people (as 5Ps), and to physical facilities and processes (as 7Ps) (CIM, 2015).

While exploratory in nature, this research sought to identify the perceptions, characteristics and expectations of nontraditional students that would be most important to implementing a successful marketing strategy. In the highly competitive market, the universities must differentiate themselves to increase nontraditional student enrollment by clearly understanding the marketing mix that fits in their marketing strategic plan (Taylor & Darling, 1991; Canterbury, 1999; Nicholls et al., 1995; Coates, 1998).

The increasingly complex nature of business and academic institution has focused attention on the use of research in identifying the marketing mix for a marketing strategy. A good marketing strategy is needed to address a very clear set of goals and strategies (customer need analyses, etc.). This research applied the 7Ps marketing mix as the conceptual framework for developing a marketing strategy geared toward the nontraditional student. This study examined the extent to which each of the 7Ps factors in the marketing mix influenced nontraditional student enrollment decisions, analyzed the findings in chapter 4, and presented conclusions and recommendations on a transformational marketing strategy in Chapter 5.

1.4 Research Questions and Hypotheses

This research was guided by the following questions:

RQ1. Does Product influence nontraditional students' enrollment and choices decisions?

H_1. There is a statistically significant relationship between product and nontraditional students' enrollment and choices decisions.

RQ2. Does Price influence nontraditional students' enrollment and choices decisions?

H_2. There is a statistically significant relationship between promotion and nontraditional students' enrollment and choices decisions.

RQ3. Does Place influence nontraditional students' enrollment and choices decisions?

H_3. There is a statistically significant relationship between price and nontraditional students' enrollment and choices decisions.

RQ4. Does Promotion influence nontraditional students' enrollment and choices decisions?

H_4. There is a statistically significant relationship between place and nontraditional students' enrollment and choices decisions.

RQ5. Does People influence nontraditional students' enrollment and choices decisions?

H_5. There is a statistically significant relationship between people and nontraditional students' enrollment and choices decisions.

RQ6. Does Physical Evidence influence nontraditional students' enrollment and choices decisions?

H_6. There is a statistically significant relationship between process and nontraditional students' enrollment and choices decisions.

RQ7. Does Process influence nontraditional students' enrollment and choices decisions?

H_7. There is a statistically significant relationship between physical evidence and nontraditional students' enrollment and choices decisions.

RQ8. Does the employer play an important role in influencing nontraditional student perceptions and choices?

H_8. The employer does not play an important role in influencing nontraditional student perceptions and choices?

1.5 Assumptions

The following assumptions are inherent in the design of this research:

- All participants clearly understand the survey questions.
- All participants will provide honest responses when filling out the survey.
- A pilot study will help to clarify and refine survey questions, and thus serve to validate the survey instrument constructed for this research.

1.6 Limitations

The following limitations are inherent in the design of this research:

- The study will have limited generalizability because it is limited to 300 participants employed by three companies

- The survey instrument was developed for this research and as such, has not been validated. Thus, it required a pilot study to test the validity and appropriateness of the survey questions.
- This study was exploratory and thus findings are suggestive, not determinative.

1.7 Delimitations

The following delimitations are inherent in the design of this study:

- Only nontraditional students participated in this study.
- The sample consisted of employees from three companies - Oerlikon Fairfield manufacturing, OscarWinski, and Thyssenkrupp Company.
- This study did not involve the assessment of programs, resources and tools other than those specifically mentioned: SAS, and EXCEL.

1.8 Summary

This chapter provided an overview of the research project including scope, significance, research questions, definitions, assumptions, limitations and delimitations. The next chapter provides a review of the literature on marketing strategy in higher education, 7Ps marketing mix, and research related to nontraditional students in higher education.

CHAPTER 2. LITERATURE REVIEW

This chapter provides a literature review of this research project and of this dissertation. It is designed to provide the findings related to this study. This content in this chapter consists of several sections. The literature review collects the definition of marketing & general business marketing strategy, marketing in higher education, enrollment in higher education, the marketing mix 7Ps, and nontraditional students' characteristics.

2.1 Marketing and General Business Strategy

What is marketing? UK based Chartered Institute of Marketing (CIM) defines marketing as: "The management process responsible for identifying, anticipating and satisfying customer requirements profitably" (p. 3); Groom the American Marketing Association states: "Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large" (2008, p.259); P. Tailor of www.learnmarketing.net asserts that: "Marketing is not about providing products or services it is essentially about providing changing benefits to the changing needs and demands of the customer" (P. Tailor, p.700); According to Rosenbloom and Dimitrova, marketing is a primary management process to ensure the products and service that can meet customer desire and even exceed customers' expectation (2011). In the academic field, marketing author Philip Kotler defines marketing as: "Satisfying needs and wants through an exchange process" (1998, p. 11).

Marketing goals are achieved by understanding the target segment population's behavior and needs with the vision of company wants and needs, and implementing a comprehensive marketing strategy plan (Wright, Chew, & Hines, 2012). Marketing strategy planning takes various aspects of the organization's marketing into consideration. The aspects of a marketing strategic plan may vary depending on the marketing models that company's product and service have (Fuente, 2016). In the years and years of study and practice, there are various models in marketing, such as Mckinsey 7S model, the 7Ps of the marketing mix, AIDA, the Ansoff Matrix, The BCG Matrix, Diffusion of Innovation, DRIP, Porter's Five Forces, Price-Quality-Strategy Model, Push and Pull Marketing, Product Lifecycle, RACE Planning, segmentation, targeting

and positioning (STP), SOSTAC (R), SWOT(TOWS) matrix, branding, etc., which are the most popular marketing concepts applied in the academic teaching level and business practice in marketing. Marketing mix- 4 Ps are wildly used in business strategy (Constantin, 2011; Lombardi, 2010; Lexa & Berlin, 2006). For instance, 4 Ps, is composed of product, promotion, price, and place, and is used to evaluate the external marketing environment analysis (Jobber, 2009). According to Shaw, a good marketing strategy lead a business success (2012).

Additionally, the marketing process highlights the important aspects in marketing from all angles. It is not just advertising and sales, but is 'about understanding the competitive marketplace', understanding your target audience, and reaching to them 'with the right product at the right price, right place, and right time. It is core to business performance in the company (CIM, 2015, p 3). The purpose of developing marketing strategy is to define the customer satisfaction, repeated purchasing and increased sales revenue and market share (Webb et al., 2011). Therefore, business to customer communication is the primary element of successful marketing communication (Kitchen & Burgmann, 2010). Technology has been changing consistently, so do marketing messages and information in marketplace (Groom, 2008).

Marketing strategy is part and parcel of the environment and can be an important competitive advantage the higher education branding research is an emerging field of study (Hemsley-Brown & Oplatka 2006). Most studies are theoretical natural study. Lowrie (2007) discussed emerging brand identities in articulation; Stensaker (2007) explored the advantage and disadvantage of branding; and Chapleo (2005) discovered successful brands in universities. A few empirical studies focused on communication of university brands, branding identity and brand architecture, and international branding (Gary et al., 2003; Baker & Balmer 1997; Chapleo 2004; Belanger et al., 2002; Bulotaite 2003). Aaker defines a brand as "a distinguishing name and/ or symbol… intended to identify the goods or service of either one seller or a group of sellers, and to differentiate those goods or service from those of competitors" (1991, p.7). A brand can be defined as identifying "something unique" regarding the product as visible goods or intangible services (Waeraas, & Solbakk, 2008).

It is not easy to measure the quality of product. Successful purchase heavily depends on the brand name reputation of the supplier. Firth Michael' study shows that "the repositioning of brand to that of a high prestige name leads to higher audit fee revenue. Brand name reputation

appears to be important in the provision of audit service" (1993, p. 381-386). The business or institutes need a good process model to analyze the effectiveness of the marketing strategic plan.

Social media marketing plays a very important role in our society and affects consumer behavior. As a brand manager, one must know how to engage customers by using social media (Gensler, Volckner, Liu, & Wiertz, 2013). Social media is a connector to connect customers and brand (Gensler et al., 2012). According to Kitchen (2005), advanced technology provides convenient communication strategy for many organizations to deliver consistent and meaningful messages to target audience. Social media can deliver the organizations' brand and identities, and strongly influence people's receptions (Gillin, 2007). Nowadays, many higher education institutions experienced a pressure from the changing technology and must utilize social media to reach many potential students for the institution.

2.2 Marketing in Higher Education

Compared with higher education in the past decades, now higher education is facing more challenges. According to *College Value and Affordability: Thoughts on the Presidents Proposed College Scorecard* (2014), President Obama pointed out that the overall higher education has declined closely below the microscope. There is an urgent call that administrators in higher education need to initiate the changes in order to be compatible and to thrive in our current higher education market (Borysenko, 2014). Borysenko believes that higher education administrators should focus on "the continued scrutiny of higher education; the prioritization of outcomes; the retention culture; the blended learning opportunity; the regionalization of online education" (p. 208).

President and CEO of Eduventures, Mark Nemec discussed the value of a college education in a White House Forum on College Value and Affordability held at Louisiana State University January 10, 2014. In his talks, Nemec stated that 25-44% of students returning to the university are nontraditional students. He called them the new majority. (January 10, 2014 presentation at the White House Forum on College Value and Affordability, Louisiana State University. Retrieved from https://www.youtube.com/watch?v=vIl_XCbYrTs).

Nontraditional students often return to the university with a different mind-set. They are connected, multitaskers, digital natives, used to creating, sharing, and learning with and from others through exploration and discovery. Their informal interest is based on exploration and

learning. With this in mind, higher education needs to pay attention to the nontraditional students who return back to school and their perception of the value of college. Wyatt states that: "Enrollment management is a critical function of colleges and universities that continues to overlook nontraditional students when developing institutional recruitment goals" (2011, p. 11). It is very important for institutions to fully understand those students' needs and aspirations, expectations and goals and in order to better recruit and provide services. According to Padlee and Reimers's study, there is a strong correlation between student's satisfaction and behavioral intentions (2015). Kiburn and Cates said that: "positive student retention is ultimately a 'win-win' situation in higher education: 'as the student completes his or her educational goals towards future earnings and institutions satisfactorily complete it mission" (2014, p. 1).

Many reasons for leading a marketing strategy for a higher education institution include seeking higher enrollment, improving reputation and prestige, pursuing additional funding, attracting qualified faculty, sharing vision and, strengthening mission, "honoring a philanthropic donor, or signifying a merger between institutions" (Nguyen & LeBlanc, 2001; Sevier, 2002, Toma, Dubrow & Hartley, 2005, p. 122). Uncovering the reasons behind an unhealthy brand and determining what is holding back the brand from growing are key factors to changing the image of a brand (Robert & Williams, 2014). Not all institutions are able to refresh their existing marketing strategy, and many will need to take a more drastic strategy of changing names and retiring the current brand (Williams, 2012).

Hemsley and Oplatka believe there is a lack of theoretical models for higher education marketing strategic plan, which was recognized by the editors of the *Journal of Marketing for Higher Education* (2006). They also point out that the focus of higher education is on people and requires constant relationship awareness. The difficulty in developing a clear marketing strategic plan principle is a result of many factors that include: "diverse stakeholders; internal structure; institutional resistance to change; the wide range of majors and programs; sub-branding by schools/ majors/facilities; information gap between choice factors identified by students and higher education publications; and the need for support by institutional leadership and formal communication mechanisms" (Edmiston, 2008, p. 123-124).

The impact of the enrollment in higher education is felt not only by the alumni and students, but also all those involved with the institutions from local community to businesses and stakeholders (Balmer & Liao, 2007). According to Williams's branding process model, he points

out the three elements of branding audit process, which include “brand image, brand identity, and brand soul. It is crucial that a brand audit accurately evaluates the goals of the institution for alignment with the brand image as seen by the customer” (p. 3). This allows efforts to be focused on strengthening the brand by emphasizing the strong brand in advertising and marketing. The main objectives become to strengthen consistency and avoid confusion to align the three forms of brand identity – “firm-based brand equity (FBBE), or brand identity; employee-based brand soul (EBBS), or brand soul; and customer-based brand equity (CBBE), brand image” (Williams & Omar, 2011, p. 4).

Additionally, innovation is changing constantly, so changes internally and externally in higher education are involved in “students, faculty, parents, governance, administrations, staff, curriculum, functions, employers and other areas in community (Zusman, 2005). Employers demand for a different set of skills from college students, such as the ability to apply technical expertise, but also to work with new information, collaborate, innovate and solve open - ended problems. The new economy has a constant impact on the competitive workforce. College students entering this job market should recognize the opportunities technology brings to society and have the educational foundation to seize those opportunities. The College of Technology made students pioneers in technology.

According to Hart Research Associates conducting Key Findings from 2013 Survey of Employers (2013), 95% of employers prefer to hire colleges graduate students who have innovation skills; 93% of employers prefer graduate students having critical thinking skills, complex problem-solving skills, oral and written communications kills, and field knowledges. 80% of employers think “college students should have broad knowledge in liberal arts and sciences regardless of their major” (Hart Research Associates, 2013, p. 2); employers also think college student are not only engaged in academic, but also should have practice in team collaboration, problem solving, internships, capstones projects, and engagements on the local community.

2.3 Enrollment in Higher Education

With worldwide technological advances, global economic instability, and institutions/department emerging, higher education (HE) has never faced such turbulence globally (Ernst & Young, 2012; UK HE International Unit, 2013). As an academic institution,

HE provides service to its customers (students) while also looking to make a profit by recruiting and retaining students to receive its services. HE is also like a business making sure to produce good products (students) for current job market.

As a social institution, HE provides services with multiple purposes to improve the citizen's quality of life (Grubb, 2003). In Vargo and Lusch's (2004) seminal service dominant logic (SDL) marketing theory, value co-creation is the number one premise that benefits all parties through interactions (Ballantyne & Varey, 2006; Payne, Storbacka, & Frow, 2008; Hilton, Hughes, & Chalcraft, 2012; Baron, Warnaby, & Hunter-Jones, 2013). Many marketing research studies use the concept of value co-creation (Achrol & Kotler, 2012). Value co-creation connects the marketing aspect to the stakeholders where consumers act as stakeholders and their input is used to develop products (Vargo & Lusch, 2004). Going forward, there must be value added to the HE experience by looking at the wants and needs of students so all stakeholders have the opportunity to seek degrees of value co-creation. Compared with higher education in past decades, modern-day higher education is facing more challenges than before.

Operating a university in a globally dynamic and challenging environment, higher education institutions prioritize marketing strategy to assure student and faculty recruitment and retention (Assas, Melewar, Cohen, & Balmer, 2013). Several researchers agreed that understanding higher education branding and building up a great reputation are of great value to universities and that this may require a branding audit (Hemsley & Goonawardana, 2007; Duesterhaus & Duesterhaus, 2014). According to a Bock study regarding the higher education institutions positioning and marketing, he claims that HEIs must reposition as needed to adapt to their customers' needs (Robert & Williams, 2014).

A university must be a place to help students reach a higher level of education and skill sets, regardless of their diverse backgrounds, if they subscribe to different values or different ways of thinking, or come from or live and work in different cultures. As pressure from strong competition in the industry, universities have to consider the business theories and processes to make marketing strategy plans for brand management in order to provide competitive customer service in a global environment (Wanjiku, 2015; Robert & Williams, 2014). Higher education has become a worldwide academic customer service market (Melewar & Akel, 2005). Finally, with the competitive job market, not only employers but also students have higher expectations on knowledge they are receiving from higher education institutes.

Zepke (2015) has shown that student engagement plays an important role in the HE landscape globally. It is defined as ‘a meta-construct” (Fredricks et al., 2004), drawing on ‘sociological, social network, organizational, psychological, cultural, pedagogic and economic research’ (Kuh et al., 2006, p. 83-94). Student engagement can be utilized to measure reflectively how successful the institution is in any of the following ways; by how much success is shown by the students (Thomas, 2012), as a way of evaluating quality teaching (McCormick et al., 2013), as a way to involve the current students as participating citizens of the community (Zepke, 2013), to show differences in individual and social wellbeing (Field, 2009), as a supporter of the success of the student (Thomas, 2012), and by transforming students from consumers of knowledge to producers of knowledge (Taylor et al., 2012).

From a sociological view, student engagement serves as a conceptual bridge connecting students, who are learning with their peers, friends, families, and local communities, to HEIs (social systems) (Lawson & Lawson’s, 2013). Lawson and Lawson believed that student engagement was the theoretical glue that joined student learning to social systems like HEI. However, student engagement in ‘a supportive intellectual and ideological environment’ cannot stay alone (Zepke, 2015, p. 2). Finger and Asun (2001) wrote about ‘turbo capitalism’, also called ‘neo-liberalism’. Neo-liberal ideas have been around for the past 25 years and come to “dominate culture, social and political life almost everywhere (Zepke, 2015). It is about interest for both parties: self-interest and the interests of the whole society. Olssen and Peters says: “The traditional professional culture of open intellectual enquiry and debate has been replaced with an institutional stress on performativity, as evidenced by the emergence of an emphasis on measured outputs: on strategic planning, performance indicators, quality assurance measures and academic audits (2005, p. 313). As Thomas (2012, p. 10) writes: “it has become increasingly clear that “success” means helping all students to become more engaged and more effective learners in higher education, thus improving their academic outcomes and their progression opportunities after graduation (or when they exit higher education)”.

The mission of the transformation is built on that foundation, attempting to transform education by evolving into the real business world. “This will be expanded and interwoven with experiences in innovation, approach to education entrepreneurship and multidisciplinary competencies such as analyst.” Zusman mentioned (2005, p. 3), that those issues raise a lot of questions, such as who pays for the colleges and universities; what does the job market look like

after graduation; who receives the benefits by attending those universities; who has accountability to make decisions for the changes etc. Even if the economy stays the same, the college tuition fee is consistently rising, future students and parents have a very high expectation of how a college student will transform into the job market (Noe, Hollenbeck, Gerhart, & Wright, 2015). In Saunders' study: '*They do not buy it: exploring the extent to which entering first year students view themselves as customers*' it is shown that only 28.9% of participants trended to students orientated with the extension of free market logic in HEIs (2005, p. 28). Student's goals, motivations, expectations and general educational orientations are deciding factors to determining whether students will pay tuition or will seek funding from other institutions (Saunders, 2005). Universities need to have a 'wider mind-set' in order to think about how to change their strategy to attract 'nontraditional learners'.

All educators are seeking the best education experience globally. In many countries, the HEIs have been increasing tuitions constantly, which lift challenges by a push in demand for HEIs "on improving the service" for "global educators". (Noe, Hollenbeck, Gerhart, & Wright, 2015, p. 6). In Padlee and Reimers's study: 'International student satisfaction with, and behavioral intentions towards, universities in Victoria' research, examining the antecedents and outcomes of satisfaction of international students (2015, p. 3). They mentioned that international students promote economic development to the Australian economy. This paper examines the antecedents and outcomes of the living experience, attitude and behavior satisfaction of international students. The research findings from "the structural equation modelling analysis emphasized the importance of 'word-of-mouth' recommendation for prospective student recruitment and in a situation of resource scarcity, highlights the need to focus resources onto the academic services, courses offered, access and augmented service areas perceived by students as having the level of satisfaction for them" (Padlee & Reimers, 2015, p. 5). They also found that administrative service and physical evidence do not have significant impact on overall student's satisfaction. There is an emphasis on 'word-of-mouth' recommendations from alumni as an important recruiting method for future students and a need to focus limited funding on the areas that students see as the most important and hold the most value to them.

Organizations should not just focus on 'product characteristic' by differentiating the product or service, and/ or develop new products or service (Hoyer et al., 2010). The customers (students) would have different perceptions and emotions towards well thought out curriculum.

Student opinion benefits both parties, which is called “co-creation’ (Carter, & Yeo, 2014). Therefore, emotions are drawn from the marketing of the HEIs in addition to the former method of selling the organization’s services or products (Bainbrdge, 2004). How do you make students satisfied and loyal to the institution? Education as a service is very intangible. To increase and maintain customer satisfaction and loyalty, HEIs need to differentiate the ‘service’ from other institutions on both “hard” and “soft” factors (Voon, 2007).

Carter and Yeo (2015) published their findings in the journal entitled *Students- as-customers’ satisfaction, predicative retention with marketing implications.* Carter et al. (2015) indicated that students expect to have a high-quality learning “academic experience”, access to funding, such as scholarships, fellowships, loans, and other work study programs, and have good social net-working and social activities within the local community.

Additionally, greater competition between HEIs leads to a potential decline in enrollment or an increase in marketing expenses or both. A strategy that has proven to be successful in the past is building trust between the student and the university. Students who are currently enrolled are shown to be more loyal to the university if there is trust built between them (Ghosh, Whipple, & Bryan, 2001). Future potential students will also be drawn to stick to a commitment to enroll in a university if they perceive a sense of trust. Trusting alumni have shown to be an excellent source of word of mouth influencers as their children and family friends look for a HEI, and source of financial contributions (Kramer & Tyler, 1996).

However, according to OECD report in 2013, the international universities students (4.3 million) are increasing rapidly with an annual increase of 7% from 2000 to 2011 (OECD, 2013). Calderon in 2010 forecasted that international student would reach 6.7 million students by 2020. The higher education market has to re-modernize its marketing strategies and tactics in order to meet the high demands and be competitive (Fleischman, Raciti, & Lawey, 2015). HEIs have dynamic and complex characteristics, the potential students selecting higher education institutions are used to choosing solely by the academic rank ((Elliott & Healy, 2001; Woodall, Hiller, & Resnick, 2012), but right now, the potential students make decisions by considering the community engagement (Agarwal, Said, Sehoole, Sirozi, & DeWit, 2008; Burdett & Crossman, 2010). Burdett and Crossman states that university- student-community engagement (U-S-CE) is a very important part of competitive advantages for HEIs (2012). In Fleischman et al.’s research study, their findings show that community engagement plays a vital role in the global learner

university experience, and also “represents a potential point of competitive advantage” (2015, p. 2). U-S-CE would provide opportunity for international students to penetrate other cultures by being involved in the local community as well as helping to shape their community. Marketing strategies need to be modernized to compete for the increased international student market. International students are looking for more community engagement when seeking institutions of learning and this can be used as a competitive advantage. The marketing strategy should look from the perspective of the international student to show them how they would fit in the community (Fleischman et al., 2015).

Therefore, these findings emphasize the expectations of the diverse students and show how important it is to provide the services that the potential student is seeking. The HEI must be aware of and anticipate the ever-changing needs of the student and provide offerings that will give the student multiple options for the diverse student body. They must never assume that all offerings will satisfy every student, but must be ready to make changes when different options are brought to the table.

2.4 The Marketing Mix

McCarthy in 1960s introduced the concept of marketing mix, which is combined by four core factors: product, price, placement, and promotion (Borden, 1964; Shaw, 2012). Marketing mix is a gauge to help businesses and marketers to create business strategy plan to produce target customer’s demands and needs. Many organizations, business leaders, and academic authors have various marketing principles and applied those concepts into marketing frameworks. Jobber claims that: “The strength of the 4 Ps approach is that it represents a memorable and practical framework for marketing decision-making and has proved useful for case study analysis in business school for many years” (2009, p. 35). Product in higher education marketing is intangible. In the traditional market, the 4 Ps model have applied tangible products very well, but once service entered into marketing, additional attributes 3 Ps-Personal, Physical evidence, and Process management are need to be added in to marketing mix (Ivy, 2008; Magrath, 1986).

Marketing in higher education plays an important role in student enrollment (Cubillo et al., 2006; Ivy, 2001; Maringe & Foskett, 2002; Fisk & Allen, 1993; Carlson, 1992; Wonders & Gyuere, 1991; Murphy & McGarrity, 1978). Marketing mix can help organizations understand the major market force and customer behavior and expectation (Enache, 2011). The student will

choose the university that offers qualifications that satisfy student needs, the tuition that meets student expectations and / or exceeded, the programs that provide student value, and courses that are provided match student needs (Ivy, 2008). Ivy appointed out that those attributes are the foundation of marketing mix - product, price, place and promotion, which are applied by higher education to guide programs, applications and enrollment (2008). However, Constantinides pointed out that the traditional marketing mix cannot address specific marketing service, marketing relationships, marketing of industrial products, or marketing in higher education (2006).

People have a strong correlation with product and impact on the education service (Enache, 2008). As one of the attributes of the marketing mix, according to CIM (2015), people refers to whoever, such as staffs, faculty, local community, and alumni etc., has interaction with your prospective students, and has a profound influence - positive and negative effect during the potential student's enrollment decision making process (2015). He discussed that the administrative staff and faculty play a fundamental role in approaching the target audience and providing excellent service to satisfy the customer (2011).

The physical evidence is "the environment in which the service is delivered and in which the firm and the customer interact, and any tangible commodities that facilitate performance or communication of the service" (Zeithaml et al., 2009, p. 313). Because educational service is an intangible product, one way to measure whether the products delivered is in the enrollment stage - physical evidence (Enache, 2011). During this stage, the environment, the buildings, the cafeteria, hardware etc. in the campus would impact the impression of 'the quality of the product that is going to be delivered' (2011, p. 28).

The place means to the channel selection & concentration that supports targeted customer's delivery and ordering (Frey, 1956). The place strategy is to provide appropriate product to customers at a convenient and acceptable level. Organizations or institutions need to provide the right product at right time and right place (CIM, 2015). However, the place is like the product, having two perspectives (Enache, 2011). If the prospective student are customers, providing the best approach to deliver the knowledge to the customers. If employers in the job market are customers to hire our graduate students, the institutions' mission is to form students to meet job market demands to place graduate student on the job market (Enache, 2011).

Price, tuition, is what is cost, to enroll in the specific program in the specific university. The amount in monetary wise that a customer is willing to spend 'to satisfy a need or set of needs through the purchase of a particular product or service' (Cravens & Piercy, 2006, p. 227). The price, a major income from educational institutions, is impacted by 'cost for expenditure, market demand, and competitor's price' (Enache, 2011, p. 26). Generally, the higher price, the higher revenue, and the higher quality expectation from customer. In higher education, the price plays the same role. The more the student needs to pay, the more value or quality the students will expect for the tuition (Ivy, 2008). Ivy claimed that the price not only impacts the revenue from enrollment fee, but also affects the quality expectation from students (2008). Prospective students take price as an important consideration when enrolling a university (Webb, Ireland, Hitt, Kistruck, & Tihanyi, 2011), because price is a symbol of brand (Enache, 2011).

Process is a complex procedure, which provides a critical path for customers to follow, which involved different people at different stages of the process (Jobber, 2009). The marketing process highlights the important aspect in marketing from all angles. It is not just advertising and sales, but is 'about understanding the competitive marketplace', understanding your target audience, and reaching them 'with the right product at the right price, right place, and right time. It is core to business performance in the company. (CIM, 2015, p 3). According to Webb et al., marketing process is about 'marketing performance, opportunity creation, opportunity recognition, innovation, opportunity exploitation, and dependent variables (2011). The process of higher education is regarding the procedures of service, such as admission, enrollment, registration, financial aid processing, accommodation, etc. which influence the prospective student's decision making (Gajic, 2012). Providing a smooth process service to prospective students can increase customer satisfaction (Enache, 2011). During the enrollment process, the process is associated with the people and with the physical evidence and can improve the branding reputation and to attract more students.

Product, what is for sale, is the primary element in marketing (Ivy, 2008). There are two categories regarding the product, either tangible product that you can see and feel, or intangible product, such as service, or an insurance policy (Gordon, 2011). It is crucial to have a unique product or service to satisfy the buyer with a value proposition, to maintain competitive (Lexa & Berlin, 2006). Due to the product as intangible service for students in higher education, the marketing mix is highly emphasized by physical evidence and people (Enache, 2011). In Ivy's

publication *A New Higher Education Marketing Mix: the 7Ps for MBA marketing (2008),* he mentioned that there are two debates: some argued that students who enrolled in university are customers, but others argued that students are materials when they come to university to earn degree, and they are products for employers to purchase after several years of study. Enache pointed out that taking consideration of the product as a customer might cause the marketing strategy to only focus on what diploma the student is pursuing, but thinking of products as labor market might cause less focus on knowledge itself and strong a correlation with industrial needs (2011). However, this study focused on enrollment in a marketing higher education perspective, so students are products in this case. This study examined the characteristics that impact needs from both the students and labor market.

Promotion is communication with customers to build public awareness, create interest, provide information, stimulate demands, differentiate product, reinforce the brand etc. (Frey, 1956). It is trying to search for multiple channels to research its target customers (Enache, 2011). Promotion is a process of communication between a university and service user with an aim to create a positive attitude on products and services, leading to their favoring in the process of purchasing on the market. Enache also pointed out that there are several communication channels to reach its target customers, such as a website to display the information, internet portal for application process, traditional advertising, social media, public relation, word of mouth reputation etc.

2.5 Nontraditional Student

According to Chalcraft, et al. (2015), we are facing so many changes, such as an economic recession, pressure from government, constant tuition increases, student's generational changes, attitude changes from students and parents, technology remodeling etc. Compared with higher education in past decades, modern-day higher education is facing more challenges than before, especially, with non- traditional students who are diverse and has been growing rapidly (Wyatt, 2011). Nontraditional students are the students whose age is between 18 and 21 year old , who did not enroll universities or colleges after graduated from high school, who are currently full time or part time employee, who are financially independent, may have family or dependents, or who attended college without possessing a high school diploma (Wyatt, 2011; Gleiman, 2015). The Center for Postsecondary and Economic Success (CLASP) announced that,

"today's typical college student is no longer an 18-year-old recent high-school graduate who enrolls full time and has limited work and family obligations. Student today are older, more diverse and have more work and family obligations to balance" (p. 1). The Lumina Foundation reported in *'Who is today's* in 2015 that: only 1/3 of enrollments aged between 18-21 year-old, 2/3 of enrollment are nontraditional students, who are older, and makeup of the major enrollment in higher education. According to Nu (2016), 36% of undergraduate student population are aged 25 or older, 47% are finically independent, 40% are enrolled in two-year college, 46% are enrolled part time, 40% are low income, 43% hold a part-time job, and 13% are single parents. The nontraditional students have diverse background, such as aged 25 or older, worked full time, and have a spouse and or dependent children to support (Newbold, Mehta & Forbus, 2010). The institutions should adapt to the shifting of population from younger generation to the nontraditional students, and make adjustments to fulfill their needs and expectations.

Additionally, Wyatt suggests that the institution needs to understand what nontraditional students' desire, needs, and want, and then develop strategies meet their expectations (2011). Without understanding the nontraditional students' barriers and background, it would be difficult for leading institutions to be successful in providing those students' demands and meeting their concerns (Deggs, 2011). The nontraditional students are growing rapidly and becoming a bigger portion population than traditional students. It is a time for higher education to evaluate their vision and missions, and consider changing their marketing strategic plan to attract more customers and meet those customer's needs (Nu, 2016).

2.6 Barriers for Nontraditional Students

Many challenges arise from government intervention and job market demands. As governments try to direct higher education in a particular way, pressure is being placed on the academic market to transform their marketing strategy in order to increase nontraditional student enrollment and to produce good products for the workforce market. Attitudes, from adult learners and families that have to cover the costs of their own education, have changed to a feeling of placing the students first when it comes to receiving the most out of their education. The employer also demands a higher expectation from re-learners as the pool of qualified candidates grows rapidly (Chalcraft, Hilton, & Hughes, 2015). They claim that: "higher education has some specific characteristics" (p. 1).

"One problem for adults is the constant, competing tension between life obligations and educational obligations. Life obligations often come first. The price that you pay for that is that it takes much longer to get the credential. One thing that we know very well is that the longer it takes, the less likely it is for people to actually achieve that credential." says Jamie Merisotis (2010, p. 3). In the report *Who is Today* (2015) by the Lumina Foundation, it explored that nontraditional students not only have school work, but also they have burden from 'financial strains', full time job, special technic demand for career development, and family responsibilities, which are time consuming and also they have less social and emotional support (2015).

With worldwide technological advances, global economic instability, and institutions / department emerging, higher education has never faced such turbulence globally (Ernst & Young, 2012; UK HE International Unit, 2013). Even though adult programs and distance learning pragmas, which is part of innovation, provide an achievable and accessible program for nontraditional students, it generates barriers for the institutions to rebuild upon the current academic design (Giles, 2012).

2.7 Current findings

People - Due to the increasing numbers of nontraditional students in higher education, student satisfaction is one of the most important elements for serving adults student in higher education (Mark, 2015). Institutions need to provide excellent services, such as providing student advice professionally and personally, better faculty and staff, expanding courses offerings etc. (2015).

Price - Most marketing groups in higher education believe that price is the major factor that impacts on student's decision making. However, some studies showed that price and financial aid packages did not strongly impact their decision (Jackson, Davis, & Matinze, 2014). Jackson et al (2014) recommended the institutions should deliver the message that the interruption of continuing education in earning can pay off, and plus there is substantial financial aid available for higher education, such as scholarships, sponsorships, assistantships, etc. Jackson et al. (2014) also addressed that there is no strong correlation between nontraditional students' behavior and brand/image and/or parent influence, but maybe some stimulations might have affected their behavior.

However, in a research report entitled *National Adult Student Priorities Report*, Ruffalo (2014-2015a) found the factors that seemed to impact nontraditional student enrollment included reputation, access capabilities, place convenience, future market replace opportunities, cost and other financial aids, personal motivation, influence from external resources (family/friends/employers), and brand awareness (size of the institution) etc.

Product - According to Giles, the smaller institutions are more likely to adapt the transformational changes in higher level (2012). He also said that the nontraditional student programs are highly impacted on those smaller institutions (2012). The important factors in service of nontraditional students are better technical support services and higher level of aspirations between social participation and subjective quality of content learning (Gilardi, 2011). Gilardi also states that nontraditional student return back to institution with various background and higher expectations on knowledge in-taken from continuous learning.

Process - The Nontraditional student programs were designed specifically to have a better access for those students. Many researchers suggest that if the institutions' strategy focused on targeting the nontraditional student population, those students would be a great contribution for Distance Education (Dwyer, et al., 2013). They claim that distance education was identified as the best approach for allowing adults to continue their degree with in their life settings (2013). Due to the characteristics of the nontraditional student, they need great support with a convenient location place and application process, flexible enrollment status, counseling, evening and weekend classes, instructor/advisor support course registration, flexible class schedule, housing, child care etc. (Bergman et al., 2014). Higher education needs to consider all those factors for a marketing strategy to provide a better support for nontraditional students.

Promotion - Most effective promotions to increase potential student awareness of the institutions marketing strategy for higher education are: 'open house', information seminar, and website/TV/radio advertisement, phone calls or individual emails (Ruffalo, 2015; Noel-Levitz, 2015).

2.6 Summary of Findings

This chapter provided background on Marketing & General business Strategy, marketing in higher education, enrollment in higher education, Nontraditional student, and the marketing

mix -7 Ps through a literature review. The next chapter provides the details of the framework and methodology in this study.

CHAPTER 3. METHODOLOGY

This chapter describes the research design and process, including the selection of the sample, how data was collected and analyzed and statistical tools utilized in analyzing the data.

3.1 Research Design

This exploratory study employed a quantitative design with a hard copy survey to investigate the relationships between the 7P market mix factors and nontraditional student attitudes, perceptions, and decisions regarding enrollment in a higher education program. This research was guided by two theoretical frameworks. The first is the 7Ps marketing mix as depicted in Figure 3.1.

Figure 1. *7Ps Marketing Mix*

The second theoretical framework falls under the principles of Andragogy (Knowles, 1984), a nontraditional approach to learning for nontraditional students. Table 1 gives a description of the major differences in the two learning approaches.

Table 1. Comparing Pedagogy and Andragogy

Pedagogy vs. Andragogy

	Pedagogical	**Andragogical**
The Learner	• The learner is dependent upon the instructor for all learning • The teacher/instructor assumes full responsibility for what is taught and how it is learned • The teacher/instructor evaluates learning	• The learner is self-directed • The learner is responsible for his/her own learning • Self-evaluation is characteristic of this approach
Role of the Learner's Experience	• The learner comes to the activity with little experience that could be tapped as a resource for learning • The experience of the instructor is most influential	• The learner brings a greater volume and quality of experience • Adults are a rich resource for one another • Different experiences assure diversity in groups of adults • Experience becomes the source of self-identify
Readiness to Learn	• Students are told what they have to learn in order to advance to the next level of mastery	• Any change is likely to trigger a readiness to learn • The need to know in order to perform more effectively in some aspect of one's life is important • Ability to assess gaps between where one is now and where one wants and needs to be
Orientation to Learning	• Learning is a process of acquiring prescribed subject matter • Content units are sequenced according to the logic of the subject matter	• Learners want to perform a task, solve a problem, live in a more satisfying way • Learning must have relevance to real-life tasks • Learning is organized around life/work situations rather than subject matter units
Motivation for Learning	• Primarily motivated by external pressures, competition for grades, and the consequences of failure	• Internal motivators: self-esteem, recognition, better quality of life, self-confidence, self-actualization

Source: http://www.educatorstechnology.com/2013/05/awesome-chart-on-pedagogy-vs-andragogy.html

This research involved two phases. Phase 1 consisted of a pilot study with a small representative sample to test the validity of the survey questions. Phase 2 was the full study in

which emails were sent to employees employed by three different companies affiliated with SIA. Permission for employees to participate in the study and for the HR departments to distribute the surveys was obtained from each company. The researcher received IRB approval prior to conducting the survey. Data was analyzed using Exploratory Factor Analysis to determine what relationships, if any, existed between the marketing mix factors and nontraditional attitudes, perceptions, and choices.

3.2 Sample

This study used a non-probability sampling method to draw a convenience sample of 300 from the population of suppliers and their employees are affiliated with Subaru Indiana Automotive (SIA) in Lafayette, Indiana. Employees at three companies were invited to participate in a hard copy survey.

3.3 Procedures

A pilot study was conducted with 20 employees at Oerlikon Fairfield manufacturing to test the accuracy and validity of the survey questions which I developed for this study. This enabled the researcher to clarify and refine questions to ensure greater validity regarding the survey questionnaire. The pilot study also provided the researcher with a deeper understanding of marketing mix factors and how they impact nontraditional enrollment decisions.

The purpose of this study was to explore the overarching question: How can the institution improve its ability to attract nontraditional students (i.e., working professionals) to enroll in its degree programs?

Phase 1: A pilot study was conducted with a small sample of the population to determine the validity of the survey instrument. The researcher was attentive to the accuracy of instructions, clarity and wording of questions, appropriateness of scales, etc. She wanted to ensure the questions were not vague or confusing. It also enabled the researcher to better group survey questions to address the research questions. Because the topic under investigation was somewhat sensitive, extra care was taken to eliminate any ambiguity in the questionnaire. Seven-point Likert scales were used extensively to assess the following:

1. Participant status, attitudes, opinions, and reasons for considering return to a university,

2. Participants appeal to be excited, willing, and making plans to pursue a higher education in the future or not.
3. Their level of involvement and participation in various university activities,
4. Their attitudes toward their work (if they did not work, they could skip this section),
5. Their social life and relationships with various reference group members,
6. Their general opinions about attending and selecting their university,
7. Their time management strategies, and
8. Their attitude toward stress.

Phase 2 involved conducting the survey among employees of three companies and then analyzing the data and presenting findings and conclusions in Chapters 4 and 5 of this research.

The researcher received permission from authorities at three companies, emailed the invitation to the HR managers, and had their HR departments send out a hard copy of the invitation to participate in this study via email, which included a link to the survey. The researcher had permission to physically appeal to the group of participants to clarify each survey question in front of a first shift group employees before they answered the survey. The researcher asked managers relay this information to second and third shift employers as well. For instance, the questions #2 and #3 on the survey, "Are you interested in pursuing a higher degree for the answer Yes, Maybe, No", the explanation was: "please indicate that if you are excited, willing, and plan to pursue a higher education in the future, if your answer is Yes or Maybe, please go to question #3 to select how many your you plan to attend a university or college"

Prior to sending out the survey, the researcher applied for and received IRB approval to conduct the study (see appendix A). Data from the surveys was collected without identifiers to protect privacy and ensure confidentiality in the process. Demographic data was captured along with responses to survey questions associated with the 7Ps marketing mix. An exploratory factor analysis was conducted, and the results were analyzed.

I worked with committee members who are marketing expertise based on the 7Ps marketing mix, and pedagogy versus andragogy framework to develop this survey. The responses on the constructive survey refers to rational for the research questions accordingly defined as following in Table 2.

Table 2. Survey Question to Rationale for the Research Questions

Survey Question	Research Question
Survey Question #6	Research Question 2 Product
Survey Question #7	Research Question 3 Price
Survey Questions # 16-17	Research Question 5 Place
Survey Question # 9-14	Research Question 6 Promotion
Survey Question # 18- 21	Research Question 7 People
Survey Question #15	Research Question 4 Physical Evidence
Survey Question #8	Research Question 1 Process
Survey Question # 21	Research Question 8 Employer Role

Data findings are presented in Chapter 4 and discussions, implications for future research, and recommendations are presented in Chapter 5, along with a conceptual model of the factors that appear to be most important in influencing nontraditional students' perceptions and choices regarding enrollment in a college or university program.

3.4 Quantitative vs Qualitative Research

Whether using quantitative or qualitative method, the researcher needs to answer research questions by using an appropriate method involving an explicit, disciplined, and systematic strategy (Hancock, Ockleford, & Windridge, 2009). Understanding the difference between quantitative and qualitative is important; different definitions have been given by different researchers.

Quantitative research is presented by numerical and manipulated observations of phenomena and generate data or data itself that translated into useful statistics. The purpose of quantitative study is to use mathematical models, theories and/or hypotheses pertaining to phenomena. It is used in a wide variety of nature and social sciences, such as biology, sociology, physics, psychology, and geology etc. (Wikipedia Encyclopedia, 2016). Hancock et al. (2009) mentioned that quantitative study is to use statistical techniques that allow researchers weight regarding a given population or sample is true in a measurable sense. In addition, according to Creswell (1994), quantitative research is "explaining phenomena by collecting numerical data that is analyzed using mathematically based methods (in particular statistics)" (p. 66).

Quantitative research is basically data-driven to present a phenomenon and certain questions by using of mathematical method, especially statistics to analyze the data (Suphat, 2010). The researcher's primary objective is to use a quantitative study to project the findings on a larger population by collecting numerical data through surveys to a smaller sample or subset of the entire population. With the collected data, the researchers analyze the data statically to make conclusions (Creswell, 2002; Thome & Giesen, 2002).

Quantitative studies attempt to explore deeply to understand how things work "through the collection and analysis of data about phenomenon" by the way they are in the world (Wyse, 2011: p. 45), and to answer questions involving what people experience and what their opinion and attitudes are. Perception of the issue and discovering an undisclosed problem where matters are not touched or not clearly identified is the reason the cultures have formed during practices, etc. (Hancock et al., 2009). Hancock et al. (2009) pointed out that the qualitative method focused on conclusion of experience or on adequately expressed non-numerical data. There are several methods of qualitative research data collection, such as focus groups, interviews, observations/participation, narratives, open-end questionnaires, and documentations (letters, blogs, or photographs) (Sekaran & Bougie, 2009).

Qualitative research is primarily exploratory in nature. Yale University professor, Curry (2015), states that qualitative research is a strategically systematic collection, organization and description of phenomena that are difficult to measure quantitatively. Qualitative methods can generate a comprehensive description of processes, subjective, impressionistic or diagnostic settings. The purpose of qualitative research is to have a broader understanding of what the attitude is, why and how people react toward the specific research topics, and what the motivation is (Moriarty, 2011; Wyse, 2011).

Mixed method focuses on collecting and analyzing the date by using both quantitative and qualitative method into one study (Murphy et al., 2014). In 2004, Johnson and Onwuegbuzie showed as "the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or languages into a single study" (p. 17). Creswell and Plano (2011) published their findings to support this assertion and observed that one single resource data is not sufficient to completely comprehend the phenomenon of interest. As Teddlie and Tashakkori (2009) has shown that one utility of mixed methods research

is that it shows the researcher how to make simultaneous confirmatory and exploratory inquires using both a quantitative and qualitative approach to verify and generate theory in the one study.

According to Wyse, "Qualitative Research is ideal for earlier phases of research projects while for the latter part of the research project, Quantitative Research is highly recommended. Quantitative Research provides the researcher a clearer picture of what to expect in his research compared to Qualitative Research" (2011, p. 23). In this study, the researcher conducted a mixed methods approach for this research. There are several reasons to implement this method. One of advantages of mixed methodology data collection is the provision of stronger inferences (Teddlie & Tashakkori, 2009). Research on the benefits of mixed method (Cresswell & Plano, 2011; Brewer & Hunter, 1986) indicates that mixed method designs can reduce the weaknesses that are innate to individual methods. Johnson and Turner (2003) believe that the fundamental principle of mixed methods research is that "Methods should be mixed in a way that has complementary strengths and overlapping weaknesses" (p. 229). This strengthening of inferences is often referred to a triangulation (Teddlie & Tashakkori; Small, 2011). Webb, Campbell, Schwarz and Sechrest (2000) offer a lot more specific definition of triangulation, which stated "Once a proposition has been confirmed by two or more independent measurement processes, the uncertainty of its interpretation is greatly reduced. The most persuasive evidence comes through a triangulation of measurement processes" (p. 3). These mixed methods would provide for the triangulation of data collection and analysis, and therefore create "The most persuasive evidence…" (Webb et al., 2000, p. 3). The reason is that employing even a minimal means of qualitative data collection in the proposed study would arguably strengthen, or may even prove to be the sole source of inference should the quantitative method result in a weak or null finding.

Teddlie and Tashakkori (2009) states the pragmatic ideological basis of mixed methods inquiry. Johnson and Onwedbuzie (2004) define pragmatism as the empirical and practical consequences of matters. Teddlie and Tashakkori (2009) believe that pragmatic characteristics are founded on the principle that "research questions drive everything" (p. 23) and thus the methods needed to answer those questions might necessitate using a combination of quantitative and qualitative approaches. Having reviewed these options, this research will be an exploratory study employing a quantitative research design.

3.5 Data Collection

Data was collected via a survey made available through the Purdue Qualtrics platform. The survey was constructed to maximize the participant's sense of anonymity and privacy in completing the survey and to minimize costs of the study. An email was sent to the permission-granting authority in each company to be distributed to all employees, explaining the nature of the study and inviting them to participate by clicking the link at the bottom of the email. A follow up reminder was issued approximately two weeks later.

3.6 Statistical Tools

All the statistical analyses used the Statistical Analysis Software (SAS). An exploratory factor analysis was also performed. Factor Analysis groups similar variables into dimensions in a process that is known as finding or identifying latent variables. Since factor analysis is an explorative analysis, it does not distinguish between independent and dependent variables.

Factor Analysis reduces the information in a model by reducing the dimensions of the observations. This procedure has multiple purposes. It can be used to simplify the data, for example reducing the number of variables in predictive regression models. If factor analysis is used for these purposes, most often factors are rotated after extraction. Factor analysis has several different rotation methods—some of them ensure that the factors are orthogonal. Then the correlation coefficient between two factors is zero, which eliminates problems of multicollinearity in regression analysis (Retrieved from http://www.statisticssolutions.com/ factor-analysis-2/).

Field stated in *Discovering Statistics* in 2009 that "SAS is a Windows-based program that can be used to perform data entry and analysis and to create tables and graphs. SAS is capable of handling substantial amounts of data and can perform all of the analyses covered in the text and much more. SAS is commonly used in the Social Sciences and in the business world" (p. 17).

The power in this study was calculated based on data collection in the pilot study. The significance level α is the probability of making the wrong decision when the null hypothesis is true. Alpha levels are used in hypothesis tests. Usually, these tests are run with an alpha level of .05 (5%), but other levels commonly used are .01 and .10. In this study, the Alpha (α) level was .05.

3.7 Survey Research

Survey research is designed to obtain information /knowledge by answering questions from respondents (Olsen, Marie & George, 2004). The purpose of conducting survey is to collect important information about the adult learners' opinions towards the marketing mix for enrollment in higher education. Olsen also stated that the survey can be either implemented by face to face interview with people or by sending mail or email to get response (2004). This survey was created based on previous research in marketing 7 Ps mixed, which is a self-structured and undisguised questionnaire. The sample population were employees of Oerlikon Fairfield manufacturing, Oscar Winski manufacturing, and the Tyssenkrup Company, which are all affiliated with SIA. According to Aldrek & Settle, this type of survey is the fastest, least expensive, and most popular (2014). The major reason I chose this method was because it was the best methodology to fit the sampling needs and time frame. A copy of the Survey can be found in Appendix B.

3.8 Institution Review Board Approval

Because this study involved Human Subject Research, Institutional Review Board (IRB) approval was sought and obtained from the university IRB (see appendix).

3.9 Summary

This chapter discussed the research design, sampling and data collection procedures, and tools to be used for data analysis. The next chapter will present research findings.

CHAPTER 4. PRESENTATION OF THE DATA

4.1 Introduction

This qualitative and quantitative mixed- study employed a survey instrument to gather data about the attitudes, perceptions and experiences of participants in marketing university degree programs to potential nontraditional students who were employed at several manufacturing plants. Data were collected using survey questions with manufacturing associates, supervisors, and managers.

This chapter presents data collected from the surveys. Document analysis is included within the participant answers to express opinions. First, the researcher conducted an ad-hoc analysis to see if at least one of the means was different from the other groups. This was followed by the data collected from multiple manufacturing industrial associates and supervisors' survey combined with document analysis. And finally, the researcher conducted a post-hoc analysis to see if the sorted averages of the ranks were statistically significant. This chapter describes the survey research design and process, including the selection of the sample, how data will be collected and analyzed and any statistical tools to be utilized in analyzing the data.

4.2 Pilot Study

A pilot study is referred to a small-scale preliminary study of a complete survey or a pretest for a research instrument such as a survey questionnaire or face to face interview guide. Pilot studies could be conducted in qualitative, quantitative, and even mixed methods research.

The purpose of conducting a pilot study was to evaluate effect size and study power (statistical variability) to predict an appropriate sample size and improve upon the study design prior to performance of a full-scale research project. It also helps researcher to see if the groups can be separated by answering those questions.

In this study, the researcher sent out 25 surveys and received 17 back. However, one participant had a challenging time understanding the last question by answering "yes" to the last question instead of ranking the 7 factors, which is an invalid response. Thus, this participant's survey was dropped from the pilot study. In addition, feedback from participants provided

insight to ensure that the survey questions were not vague or caused some confusion in the full study.

Table 3. A SAS F Test for One-Way ANOVA

The SAS System

The POWER Procedure
Overall F Test for One-Way ANOVA

Fixed Scenario Elements

Method	Exact
Group Means	3.25 3.3125 4.25 4 4.75 3.75 4.6875
Standard Deviation	2.036
Nominal Power	0.95
Alpha	0.05

Computed N per Group

Actual Power	**N per Group**
0.954	41

A SAS F test for One-Way ANOVA was used to calculate the required sample size for the desired power (as shown in table 3). The group means are as follows: 3.25, 3.3125, 4.25, 4, 4.47, 3.75 and 4.6875 with a standard deviation of 2.036. Nominal power is 0.95 with an Alpha level of 0.05. SAS computed a sample size per group of 41 which would yield an actual power of 0.954. Since each participant ranked the seven factors, there is a response for each factor (each group) from every single participant. Therefore, the sampling size for this portion of the study should be 41.

Table 4. A SAS T Test for Mean Difference

The SAS System

The POWER Procedure
Two-Sample t Test for Mean Difference

Fixed Scenario Elements

Distribution	Normal
Method	Exact
Mean Difference	1
Standard Deviation	2.036
Nominal Power	0.95
Number of Sides	2
Null Difference	0
Alpha	0.05

Computed N per Group

Actual Power	**N per Group**
0.951	109

Two questions from the surveys were randomly selected to determine how many sample per group was necessary to have a power of 0.95 with a mean difference of 1(as shown in table 4). An overall sample size was calculated using SAS F test for two-sample t Test to compare two population averages by comparing two independent samples. The standard deviation is 2.036 and alpha level is set to 0.05. Therefore, an overall sample size of 109 per group would give a power of 0.951.

4.3 Full Data Collection and Response Rate

The survey data was collected by distributing hard copies to employees through each company's HR department. After completing, all participants just needed to drop the hard copies to the box of that company. This mode was not efficient but was selected to maximize the participant's sense of anonymity and privacy in completing the survey.

The survey invitations were distributed in increments of approximately 1500 in three companies totally, Oerlikon Fairfiled, Oscar Winski, and Chiyota, and Thyssenkrupp Company. Data collection took approximately two and half months to complete.

A total of 148 surveys were returned. However, incident to the initial data conditioning procedure, a final total survey was deemed usable for the subsequent analyses differently depending on each question. This final sample size (n = 120) represents 8% of the total sample (n = 1500) and approximately 6% of the population estimation (N = 2000 approximately).

4.4 Research Question 1: Product

RQ1. Does Product influence nontraditional students' enrollment and choices decisions?

This references participant responses to Question 6 in the survey. The equation employed for this analysis was:

$$H0: \mu_{apply\ to\ future\ career} = \mu_{job\ related}$$

This analysis tested the relationship between the mean score for "General knowledge that will apply to my future career" = the mean score of "Content that will be related to my work", using the following equation:

$$H1: \mu_{apply\ to\ future\ career} \neq \mu_{job\ related}$$

Analysis indicated the mean scores are NOT the same. Next, the researcher examined the residual plots to assess the validity of model assumptions.

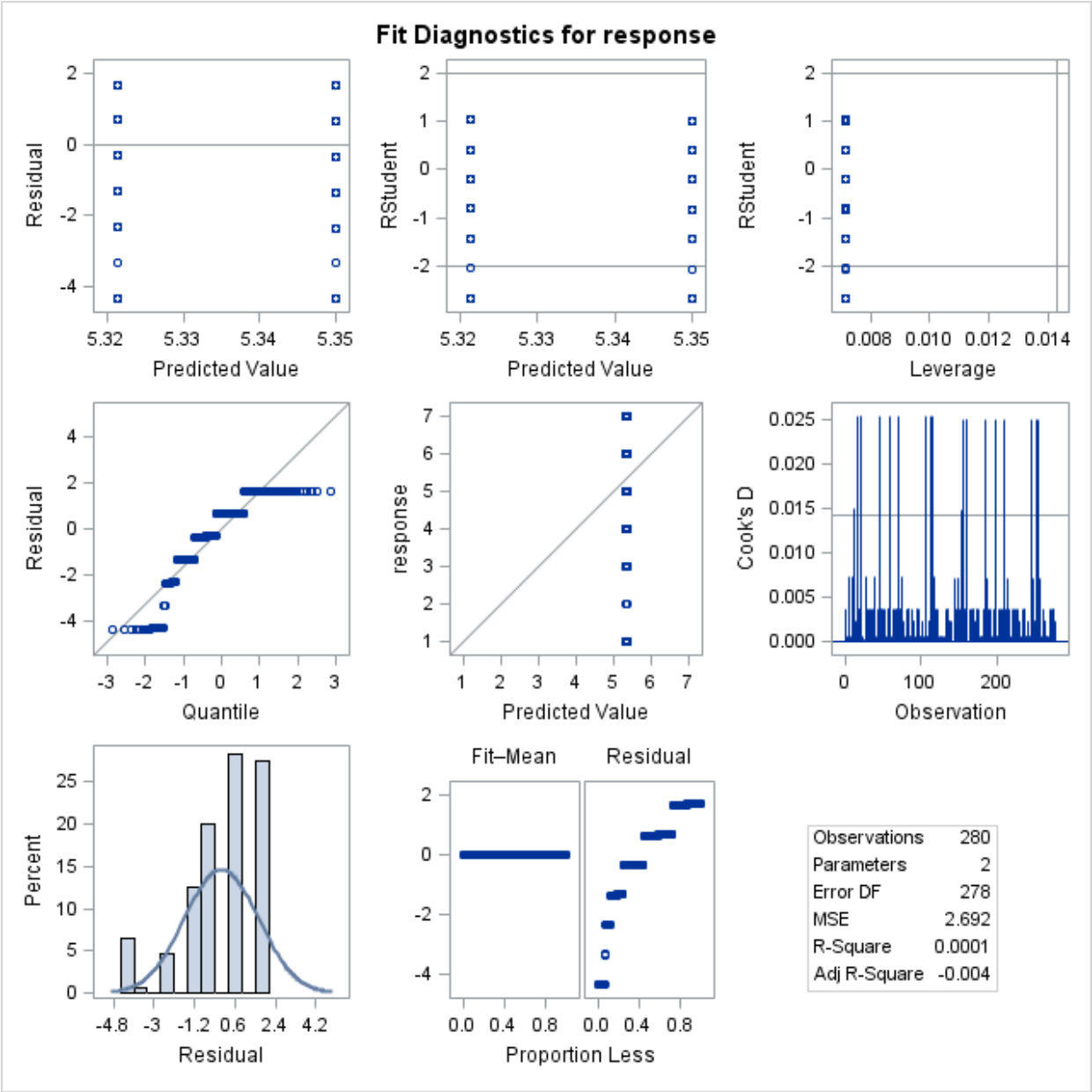

Figure 2. *Residual Plot for Product*

The Normality assumption included (as shown in figure 2):

1. Homogeneous (or constant) variance (based on 1.1).
2. Normality of variance based on (1.2) and (1.3).

For this analysis, the researcher looked solely at the first column of the graphs.

(1,1) Residual plot: there are 2 lines, if you connect the dots. This is because responses are 2 categories. So the big takeaway is that the averages hover around 0.

(2,1) QQ-plot: points are aligned along the diagonal. Therefore, normality assumption is satisfied.

(3,1) Histogram: The blue line is the ideal normal distribution, based on the data. In this instance, it appears there is some overlap.

Table 5. R-Square and Response Mean for Product

R-Square	Coeff Var	Root MSE	Response Mean
0.000076	30.75019	1.640742	5.335714

R-Square: 0.0076% variation in the response can be explained by the linear model (as shown in table 5).

Root MSE (Mean Squared Error): 1.640742^2 is the constant variance in the model, i.e.

$$Y = X\beta + \epsilon, \epsilon \sim N(0, \sigma^2), \hat{\sigma}^2 = 1.640742^2$$

Table 6. Standard Error for Product

Parameter	Estimate		Standard Error	t-Value	Pr > |t|
Intercept	5.321428571	B	0.13866802	38.38	<.0001
group_index 0	0.028571429	B	0.19610620	0.15	0.8843
group_index 1	0.000000000	B	.	.	.

Parameter	Estimate	Standard Error	t-Value	Pr > |t|
group_index0	5.350000000	0.13866802	38.58	<.0001
group_index 1	5.321428571	0.13866802	38.38	<.0001

This can be viewed as the output to test groupIndex0 and groupIndex 1 (as shown in table 6). The above model does that. The p-value tests whether the estimate was significantly different from 0 or not.

Table 7. Sum of Squares for Product

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.0571429	0.0571429	0.02	0.8843
Error	278	748.3857143	2.6920349		
Corrected Total	279	748.4428571			

From table above, the researcher used the equation:

$$Y = 5.321428571 + 0.028571429 * \text{group_index}$$

There are 148 total observations, but there are 8 missing values. That resulted in N(product) =140 observations after removing the missing values. Therefore, m(product) =0.0571429, the p-value = 0.8843, so p-value > alpha = 0.05 (as shown in table 7).

Therefore, we may conclude, given alpha is 0.05, that the mean score for "General knowledge that will apply to my future career" is not statistically significantly different from the mean score of "content that will be related to my work".

4.5 Research Question 2: Price

RQ2. Does Price influence nontraditional students' enrollment and choices decisions?

This refers to responses to question 7 on the survey. Out of 148 respondents, 28 respondents provided invalid data. That meant the deletion of 28 rows of observations for Price sub-variables, which resulted in 120 observations for 6 groups. I compared responses across 6 levels of Price as reflected in Scholarship: under $3,000; $3,000-$5,000; $5,000-$8,000; $8,000-$10,000; and over $10,000. The guiding equation was:

$$H0: \mu_{Scholarship} = \mu_{Under\ \$3,000} = \mu_{\$3k-\$5k} = \mu_{\$5k-\$8k} = \mu_{\$8k-\$10k} = \mu_{Over\ \$10k}$$

The findings indicated that all means for the sub-levels of Price were the same.

H1: At least one of the means is different from the other group.

The researcher then examined the residual plots to assess validity of model assumptions.

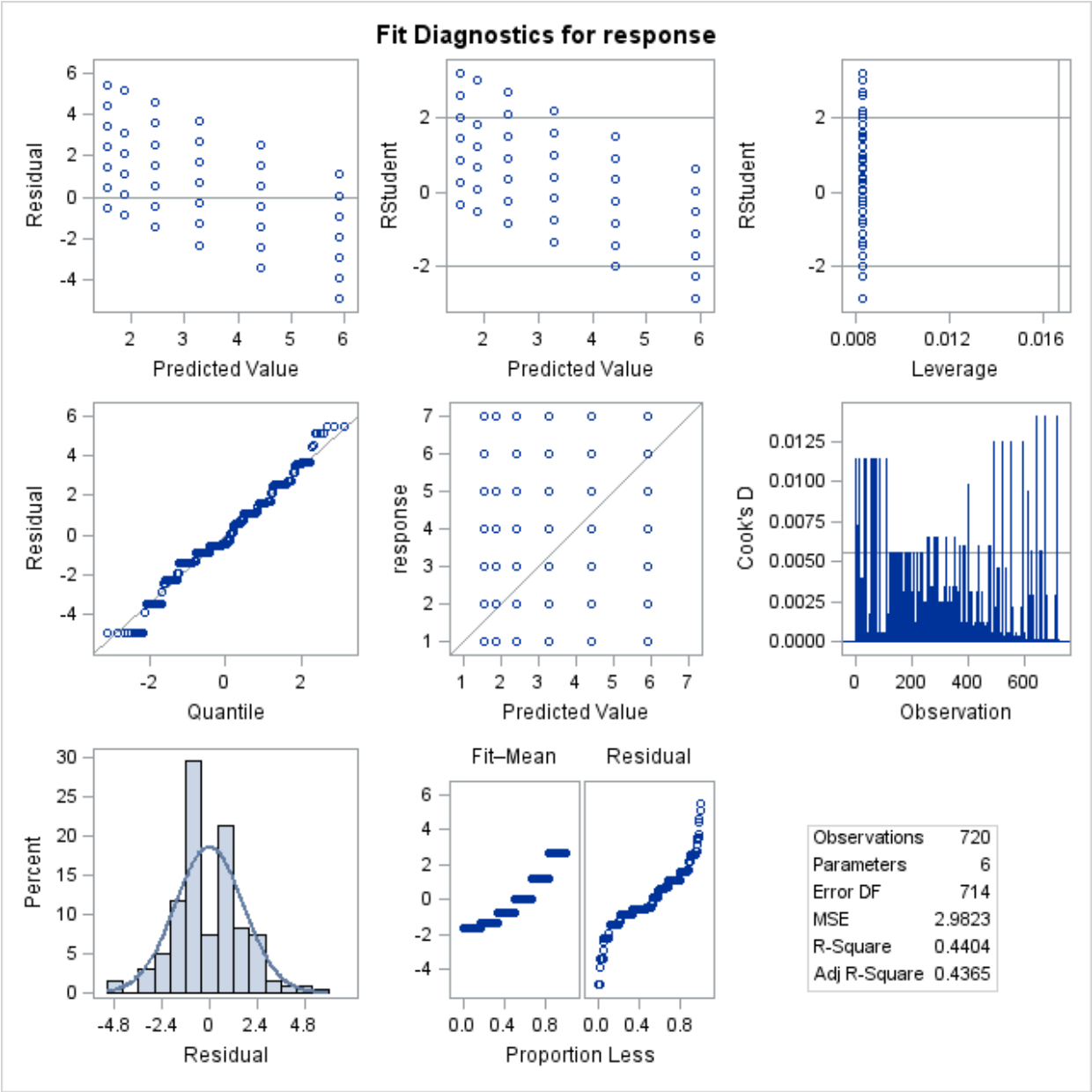

Figure 3. *Residual Plot for Price*

The Normality Assumption included (as shown in figure 3):

1. Homogeneous (or constant) variance (based on 1.1).
2. Normality of variance based on (1.2) and (1.3).

Looking only at the first column of graphs, I concluded:

(1,1) Residual plot: there are 2 lines, if you connect the dots. This is because responses are 2 categories. So the big takeaway was that the averages are around 0.

(2,1) QQ-plot: points are aligned along the diagonal. Therefore, normality assumption is satisfied.

(3,1) histogram: the blue line is the ideal normal distribution, based on the data. And in this instance, there is some overlap.

Table 8. R-Square and Response Mean for Price

R-Square	Coeff Var	Root MSE	Response Mean
0.440446	53.20479	1.726939	3.245833

R-Square:44.0446% variation in my response can be explained by the linear model (as shown in table 8).

Root MSE (mean Squared Error): 1.726939 ^2 is the constant variance in the model, i.e. The equation employed was:

$$Y = X\beta + \epsilon, \epsilon \sim N(0, \sigma^2), \hat{\sigma}^2 = 1.726939^2$$

Table 9. Standard Error for Price

Parameter	Estimate		Standard Error	t Value	Pr > |t|
Intercept	1.541666667	B	0.15764723	9.78	<.0001
group_index 0	4.366666667	B	0.22294685	19.59	<.0001
group_index 1	2.891666667	B	0.22294685	12.97	<.0001
group_index 2	1.750000000	B	0.22294685	7.85	<.0001
group_index 3	0.891666667	B	0.22294685	4.00	<.0001
group_index 4	0.325000000	B	0.22294685	1.46	0.1454
group_index 5	0.000000000	B	.	.	.

In this output, as shown in table 9, the researcher tested groupIndex0, so the above model explains the groupIndex 0,1,2,3,4,5. The p-value tests whether the estimate is significantly different from 0 or not. The supporting equation is:

$$Y = 1.541666667 + 4.366666667 * \text{group}_{\text{index0}} + 2.891666667 * \text{group}_{\text{index1}} + \cdots 0.325 * \text{group}_{\text{index4}}$$

Table 10. Sum of Squares for Price

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	1676.112500	335.222500	112.40	<.0001
Error	714	2129.375000	2.982318		
Corrected Total	719	3805.487500			

Assuming alpha equals 0.05, P-value ≤ .0001 (as shown in table 10), from the table above, one may conclude there was a statistically significantly difference for each adjacent value in the sorted averages of the sub-levels of the Price group.

Table 11. Tukey's Studentized Range (HSD) for Responses for Price

The SAS System

The GLM Procedure
Tukey's Studentized Range (HSD) Test for responses

Means with the same letter are not significantly different.

Tukey Grouping		Mean	N	group_index
	A	5.9083	120	0
	B	4.4333	120	1
	C	3.2917	120	2
	D	2.4333	120	3
	D			
E	D	1.8667	120	4
E				
E		1.5417	120	5

In the analysis, as shown in table 11, the researcher grouped the sub-levels of Price as 0=scholarship; 1= under $3,000; 2=$3,000-$5,000; 3=$5,000-$8,000; 4=$8,000-$10,000; 5=over $10,000. Tukey's Studentized Range (HSD) Test for responses showed that

$$\mu_{Over\ \$10k} < \mu_{\$8k-\$10k} < \mu_{\$5k-8k} < \mu_{\$3k-\$5k} < \mu_{Under\ \$3k} < \mu_{Scholarship}$$

An analysis of the findings suggested that the means for Scholarship, under $3k, and $3k-$5k, were significantly significant. However, the means for $5k-$8k, $8k-$10k and over $10k were not significantly significant.

4.6 Research Question 3: Place

RQ3. Does Place influence nontraditional students' enrollment and choices decisions?

This referenced responses to questions 16 and 17 on the survey. There were 148 respondents, but 13 responses provided invalid data. Therefore, 13 rows of observations that related to Place were deleted, which resulted in a total of 135 observations for 8 groups. The researcher compared responses across 8 sub-levels of Place: within 10 miles of home or workplace, nearby work with the distance in 30 minutes, nearby work with the distance in 60 miles, within my state, outside the state where I reside, flexible with work on the weekend, flexible with work in the evenings, and flexible with work online.

For this analysis,

H0: All mean of sub-place group were the same.

H1: At least one of the means was different from the other group.

The researcher looked at the residual plots to assess validity of model assumptions.

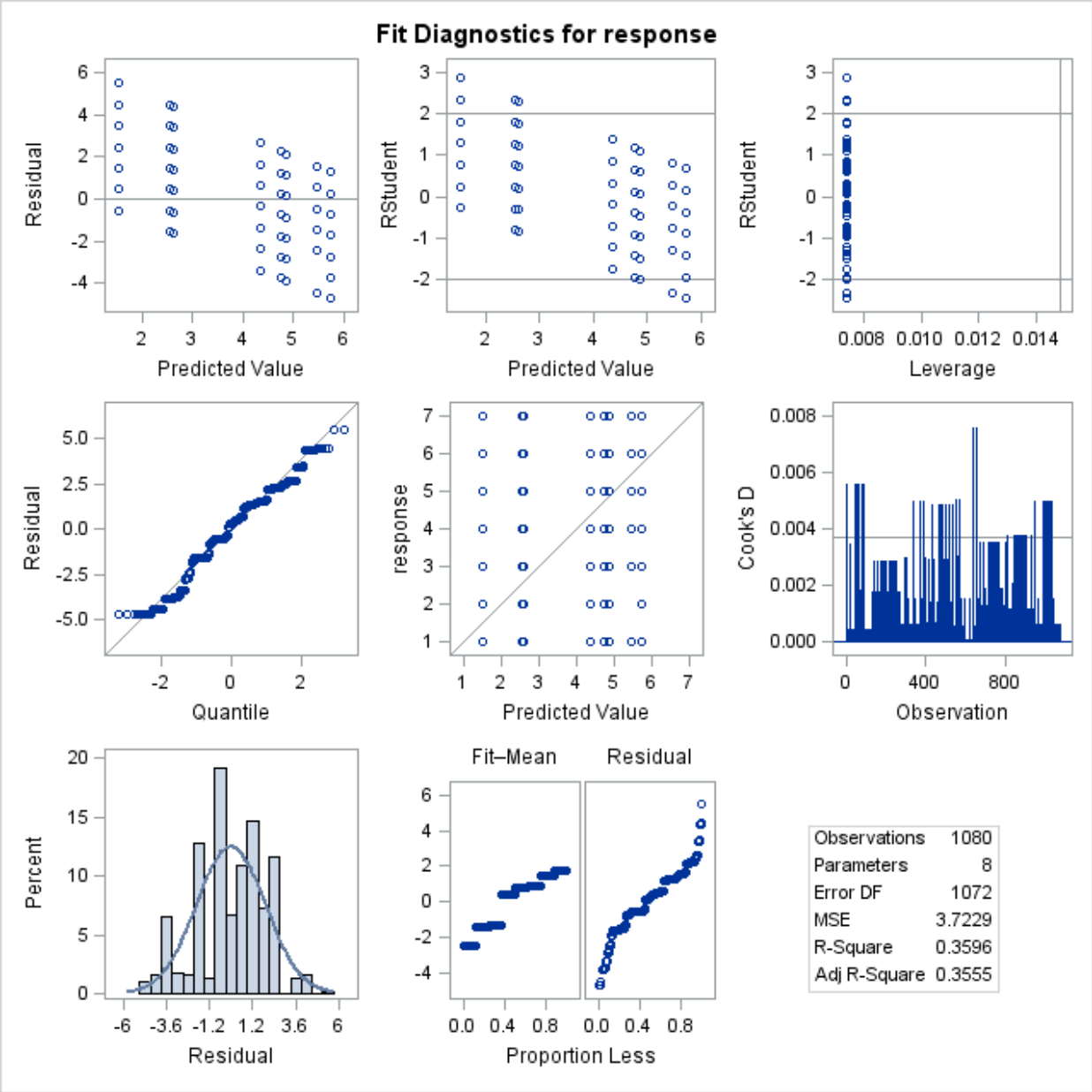

Figure 4. *Residual Plot for Place*

The Normality Assumption included (as shown in figure 4):

1. Homogeneous (or constant) variance (based on 1.1).
2. Normality of variance based on (1.2) and (1.3).

In looking only at the first column of graphs, I found:

(1,1) Residual plot: there are 8 lines, if you connect the dots. This is because the responses are 7 categories. So, the big takeaway is that the averages are around 0.

(2,1) QQ-plot: points are aligned along the diagonal. Therefore, normality assumption is satisfied.

(3,1) histogram: the blue line is the ideal normal distribution, based on the data. It appears there is some overlap.

Table 12. R-Square and Response Means for Place

R-Square	Coeff Var	Root MSE	response Mean
0.359650	48.51773	1.929478	3.976852

R-Square: 35.9650% variation in my response can be explained by the linear model (as shown in table 12).

Root MSE (mean Squared Error): 1.929478 ^2 is the constant variance in the model, i.e. The equation employed was:

$$Y = X\beta + \epsilon, \epsilon \sim N(0, \sigma^2), \hat{\sigma}^2 = 1.929478^2$$

Table 13. Standard Error for Place

Parameter	Estimate		Standard Error	t Value	Pr > |t|
Intercept	5.451851852	B	0.16606303	32.83	<.0001
group_index 0	0.259259259	B	0.23484859	1.10	0.2699
group_index 1	-1.096296296	B	0.23484859	-4.67	<.0001
group_index 2	-2.903703704	B	0.23484859	-12.36	<.0001
group_index 3	-2.837037037	B	0.23484859	-12.08	<.0001
group_index 4	-3.925925926	B	0.23484859	-16.72	<.0001
group_index 5	-0.703703704	B	0.23484859	-3.00	0.0028
group_index 6	-0.592592593	B	0.23484859	-2.52	0.0118
group_index 7	0.000000000	B	.	.	.

For this analysis, as shown in table 13, I tested groupIndex0, so the above model explains the groupIndex 0,1,2,3,4,5,6,7. The p-value tests whether the estimate is significantly different from 0 or not. The supporting equation was:

$$Y = 5.451851852 + 0.259259259 * \text{group}_{\text{index0}} + (-1.096296296) * \text{group}_{\text{index1}} + \cdots (-0.592592593) * \text{group}_{\text{index6}}$$

Table 14. Sum of Squares for Place

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	2241.487963	320.212566	86.01	<.0001
Error	1072	3990.933333	3.722886		
Corrected Total	1079	6232.421296			

Assuming alpha equals 0.05, P-value ≤ .0001 in the table 14 shows that the estimate was significantly different from 0. The researcher concluded there was a statistically significantly difference for each adjacent value in the sorted averages of the level of the Place group.

Table 15. Tukey Grouping for Place

Means with the same letter are not significantly different.

Tukey Grouping		Mean	N	group_index
	A	5.7111	135	0
	A			
B	A	5.4519	135	7
B				
B	C	4.8593	135	6
B	C			
B	C	4.7481	135	5
	C			
	C	4.3556	135	1
	D	2.6148	135	3
	D			
	D	2.5481	135	2
	E	1.5259	135	4

In the analysis, as shown in table 15, the researcher grouped the sub-levels for the Place group as 0= within 10 miles of my home or workplace; 1= nearby work with the distance in 30 mins; 2= nearby work with the distance in 60 miles; 3= within my state; 4= outside the state where I reside; 5= flexible with work on the weekend; 6= flexible with work in the evenings; and 7= flexible with work online. Tukey's Studentized Range (HSD) Test for response showed that

$$\mu_{\text{outside the state where I reside}} < \mu_{\text{nearby work with the distance in 60 miles}} < \mu_{\text{within my state}} < \mu_{\text{nearby work with the distance in 30 mins}} < \mu_{\text{flexible with work on the weekend}} < \mu_{\text{flexible with work in the evenings}} < \mu_{\text{flexible with work online}} < \mu_{\text{within 10 miles of my home or workplace}}$$

Analysis of the data resulted in a finding of no significant difference among the sub-levels for Place. The mean of within 10 miles of my home or workplace and flexible with work online are not significantly different; the mean of flexible with work online, flexible with work in the evenings, and flexible with work on the weekend are not significantly different; the mean of flexible with work in the evenings, flexible with work on the weekend, and nearby work with the distance in 30 minutes are not significantly different; the mean of within my state, nearby work with the distance in 60 miles, and outside the state where I reside are not significantly different.

4.7 Research Question 4: Promotion

RQ4. Does Promotion influence nontraditional students' enrollment and choices decisions?

This referenced participant responses to questions 9-14 on the survey. There were 148 respondents, but 16 responses provided invalid data. Therefore, 16 rows of observations that related to Promotion were deleted, which resulted in a total of 132 observations for 7 groups. There are 7 sub-levels of Promotion: well-known university instead of a community college, received more information regarding programs, open house or seminar, obtain information via online, and obtain information via phone calls or emails, listening to radio, watching TV, to be compared.

$$H0: \mu_{\text{well-known university instead of a community college}}$$

$$= \mu_{\text{received more information regarding programs}} = \mu_{\text{open house or seminar}}$$

$$= \mu_{\text{obtain information via online}}$$

$$= \mu_{\text{obtain information via phone calls or emails}} = \mu_{listening\ to\ radio} = \mu_{\text{watching TV}}$$

This would indicate that the means of sub-levels for the Promotion group are the same.

H1: At least one of the means is different from the other group.

The researcher reviewed the residual plots to assess validity of model assumptions.

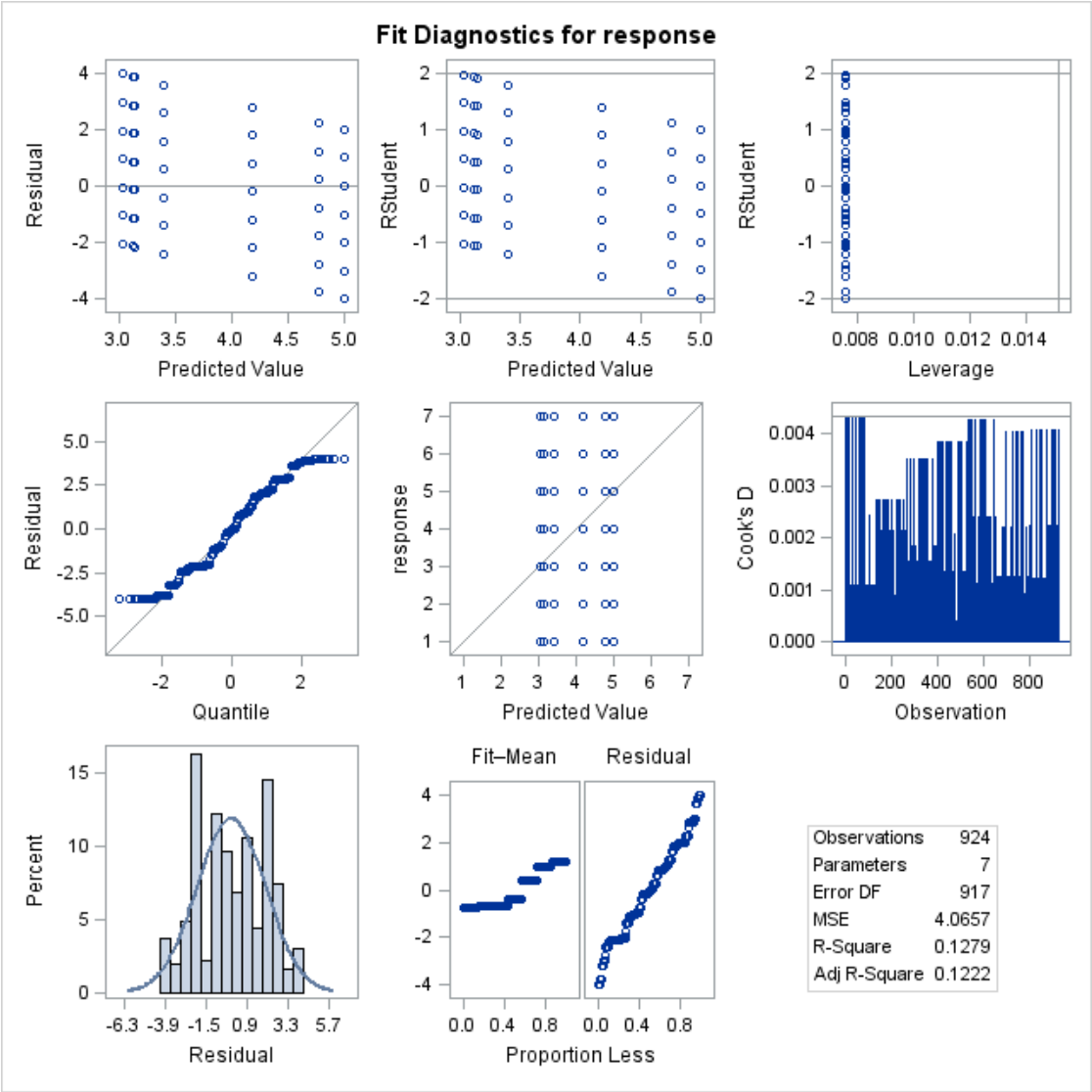

Figure 5. *Residual Plot for Promotion*

The Normality Assumption included (as shown in figure 5):

1. Homogeneous (or constant) variance (based on 1.1).
2. Normality of variance based on (1.2) and (1.3).

For interpretation, the researcher looked only at the first column of graph and concluded:

(1,1) Residual plot: there are 7 lines, if you connect the dots. This is because the responses are 7 categories. So the big takeaway is that the averages are around 0.

(2,1) QQ-plot: points are aligned along the diagonal. Therefore, normality assumption is satisfied.

(3,1) histogram: the blue line is the ideal normal distribution, based on the data. There appears to be some overlap.

Table 16. R-Square and Response Mean for Promotion

R-Square	Coeff Var	Root MSE	Response Mean
0.127876	52.98980	2.016365	3.805195

R-Square: 12.7876% variation in my response can be explained by the linear model (as shown in table 16).

Root MSE (mean Squared Error): 2.016365 ^2 is the constant variance in the model, that is, the equation is:

$$Y = X\beta + \epsilon, \epsilon \sim N(0, \sigma^2), \hat{\sigma}^2 = 2.016365^2$$

Table 17. Standard Error for Promotion

Parameter	Estimate		Standard Error	t Value	Pr > |t|
Intercept	3.121212121	B	0.17550205	17.78	<.0001
group_index 0	1.871212121	B	0.24819738	7.54	<.0001
group_index 1	1.060606061	B	0.24819738	4.27	<.0001
group_index 2	0.280303030	B	0.24819738	1.13	0.2590
group_index 3	1.643939394	B	0.24819738	6.62	<.0001
group_index 4	-0.090909091	B	0.24819738	-0.37	0.7142
group_index 5	0.022727273	B	0.24819738	0.09	0.9271
group_index 6	0.000000000	B	.	.	.

As before, the researcher tested groupIndex0, so the table 17 above model explains the group index 0,1,2,3,4,5,6. The p-value tests whether the estimate was significantly different from 0 or not. The supporting equation was:

$$Y = 3.121212121 + 1.8712121 * \text{group}_{\text{index0}} + 1.060606061 * \text{group}_{\text{index1}} + \cdots 0.022727273 * \text{group}_{\text{index5}}$$

Table 18. Sum of Squares for Promotion

Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	6	546.662338	91.110390	22.41	<.0001
Error	917	3728.272727	4.065728		
Corrected Total	923	4274.935065			

Assuming alpha equals 0.05, P-value ≤ .0001, the table 18 shows that the estimate is significantly different from 0. One may therefore conclude a statistically significantly difference for each adjacent value in the sorted averages of the sub-levels of the Promotion group.

Table 19. Tukey Grouping for Promotion

Means with the same letter are not significantly different.				
Tukey Grouping		**Mean**	**N**	**group_index**
	A	4.9924	132	0
	A			
B	A	4.7652	132	3
B				
B		4.1818	132	1
	C	3.4015	132	2
	C			
	C	3.1439	132	5
	C			
	C	3.1212	132	6
	C			
	C	3.0303	132	4

In the analysis, as shown in table 19, the researcher grouped the sub-levels of the Promotion group as 0= well-known university instead of a community college; 1= received more information regarding programs; 2= open house or seminar; 3= obtain information via online; 4=obtain information via phone calls or emails; 5= listening to radio; and 6= watching TV. Tukey's Studentized Range (HSD) Test for responses showed that

$$\mu_{\text{obtain information via phone calls or emails}} < \mu_{\text{watching TV}} < \mu_{\text{listening to radio}}$$
$$< \mu_{\text{open house or seminar}} < \mu_{\text{received more information regarding programs}}$$
$$< \mu_{\text{obtain information via online}} < \mu_{\text{well-known university instead of a community college}}$$

An analysis of the findings no significant difference for any of the sub-level means. Thus, the means of well-known university instead of a community college and obtain information via online were not significantly different. The means of obtain information via online and received more information regarding programs were not significantly different. The

means of open house or seminar, listening to radio, watching TV, and obtain information via phone calls or emails were not significantly different.

4.8 Research Question 5: People

RQ5. Does People influence nontraditional students' enrollment and choices decisions?

This referenced responses to questions 18-21 on the survey. There were 148 respondents, but 21 responses provided invalid data. Therefore, 21 rows of observations that related People were deleted, which have total of 127 observations for 5 groups. I compared responses across 5 sub-levels for People: professor with real-world experience, professor with a strong theoretical or academic background, staff members who know policies and procedures very well, your spouse or significant would be supportive, and your company would be supportive.

$$H0: \mu_{Professor\ with\ real-world\ experience} = \mu_{Professor\ with\ a\ strong\ theoretical\ or\ academic\ background} = \mu_{Staff\ members\ who\ know\ policies\ and\ procedures\ very\ well} = \mu_{Your\ spouse\ or\ significant\ would\ be\ supportive} = \mu_{Your\ company\ would\ be\ supportive}$$

If true, it would indicate all means for the sub-levels of People were the same.

H1: At least one of the means was different from the other group.

The researcher examined the residual plots to assess validity of model assumptions.

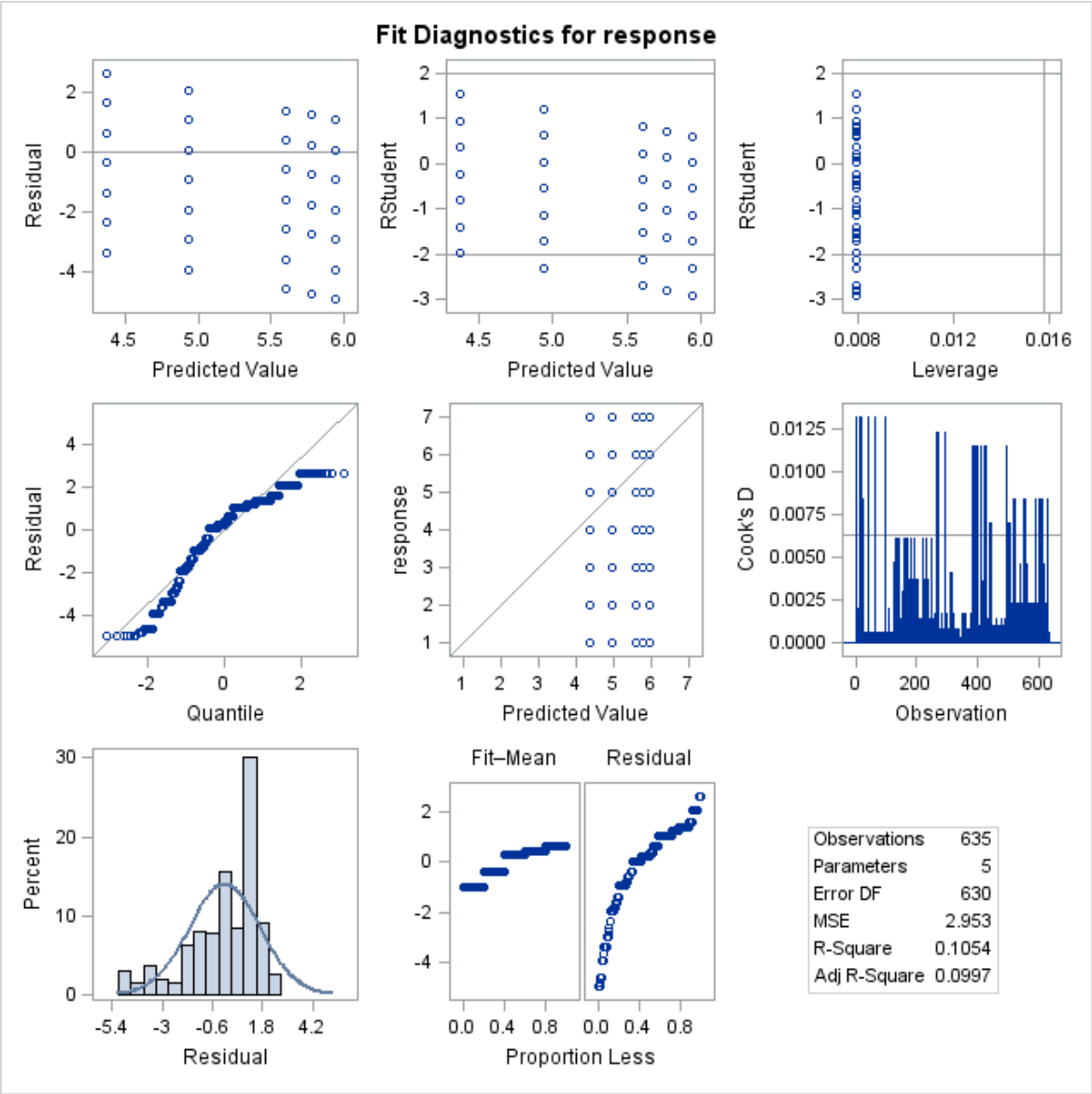

Figure 6. *Residual Plot for People*

The Normality Assumption included (as shown in figure 6):

1. Homogeneous (or constant) variance (based on 1.1).
2. Normality of variance based on (1.2) and (1.3).

To interpret the residual plots, the researcher looked only at the first column of graphs and found:

(1,1) Residual plot: there are 5 lines, if you connect the dots. This is because the responses are 5 categories. So the big takeaway is that the averages are around 0.

(2,1) QQ-plot: points are aligned along the diagonal. Therefore, normality assumption is satisfied.

(3,1) histogram: the blue line is the ideal normal distribution, based on the data. It appears there is some overlap.

Table 20. R-Square and Response Mean for People

R-Square	Coeff Var	Root MSE	Response Mean
0.105366	32.26518	1.718438	5.325984

R-Square: 10.5366% variation in my response can be explained by the linear model (as shown in table 20).

Root MSE (mean Squared Error): 1.718438 ^2 is the constant variance in the model, i.e.

$$Y = X\beta + \epsilon, \epsilon \sim N(0, \sigma^2), \hat{\sigma}^2 = 1.718438^2$$

Table 21. Standard Error for People

Parameter	Estimate		Standard Error	t Value	Pr > |t|
Intercept	4.937007874	B	0.15248676	32.38	<.0001
group_index 0	1.007874016	B	0.21564884	4.67	<.0001
group_index 1	-0.566929134	B	0.21564884	-2.63	0.0088
group_index 2	0.834645669	B	0.21564884	3.87	0.0001
group_index 3	0.669291339	B	0.21564884	3.10	0.0020
group_index 4	0.000000000	B	.	.	.

In this output, the researcher tested groupIndex0, so the above model explains the groupIndex 0,1,2,3,4 (as shown in table 21). The p-value tests whether the estimate is significantly different from 0 or not.

$$Y = 4.937007874 + 1.007874016 * \text{group}_{\text{index0}} + (-0.566929134) * \text{group}_{\text{index1}} + \cdots 0.669291339 * \text{group}_{\text{index3}}$$

Table 22. Sum of Squares for People

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	219.111811	54.777953	18.55	<.0001
Error	630	1860.409449	2.953031		
Corrected Total	634	2079.521260			

Assuming alpha equals 0.05, P-value ≤ .0001, the results presented in the table 22 show that the estimate was significantly different from 0. Based on the findings, the researcher concluded there was a statistically significantly difference for each adjacent value in the sorted averages of the sub-levels of the People group.

Table 23. Tukey Grouping for People

Means with the same letter are not significantly different.			
Tukey Grouping	**Mean**	**N**	**group_index**
A	5.9449	127	0
A			
A	5.7717	127	2
A			
A	5.6063	127	3
B	4.9370	127	4
B			
B	4.3701	127	1

For this analysis, as shown in table 23, the researcher grouped sub-levels for People as 0= professor with real-world experience; 1= professor with a strong theoretical or academic background; 2= Staff members who know policies and procedures very well; 3= your spouse or

significant would be supportive; and 4= your company would be supportive. Tukey's Studentized Range (HSD) Test for response showed that

$$\mu_{\text{professor with a strong theoretical or academic background}} < \mu_{\text{your company would be supportive}} < \mu_{\text{your spouse or significant would be supportive}} < \mu_{\text{Staff members who know policies and procedures very well}} < \mu_{\text{professor with real-world experience}}$$

The findings indicated no statistically significant difference among the sub-levels of People. The means for professor with real-world experience, staff members who know policies and procedures very well, and support of your spouse or significant other were not significantly different. Likewise, the means of your company would be supportive, and professor with real-world experience were not significantly different.

4.9 Research Question 6: Physical Evidence

RQ6. Does Physical Evidence influence nontraditional students' enrollment and choices decisions?

This references responses to question 15 on the survey. There were 148 respondents, but 10 responses provided invalid data. Therefore, 10 rows of observations that related Physical Evidence were deleted, which resulted in a total of 138 observations for 5 groups. The researcher compared responses across 5 levels of Physical Evidence: more social activities, active nightlife activities, housing available, provides daycare service, and better facilities/buildings. The equation the researcher employed was:

$$H0: \mu_{more\ scoial\ activies} = \mu_{active\ nightlife\ activies} = \mu_{\ housing\ avaibale} = \mu_{privide\ daycare\ service} = \mu_{\ better\ facilities/buildings}$$

According to the findings, all means for the Sub-levels of Physical Evidence were the same across groups.

H1: At least one of the means was different from the other group.

Next, the researcher looked at the residual plots to assess validity of model assumptions.

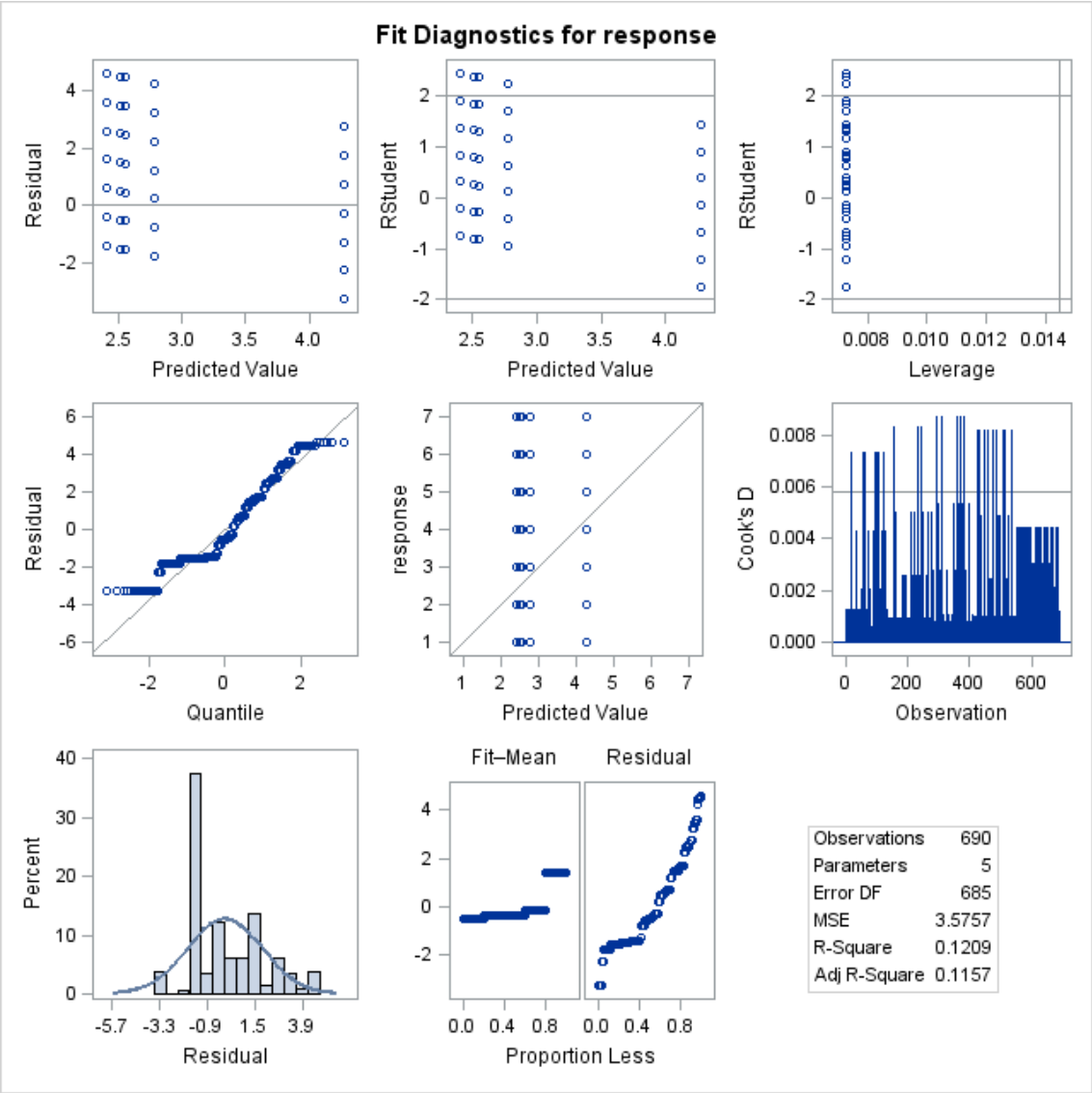

Figure 7. *Residual Plot for Physical Evidence*

The Normality Assumption included (as shown in figure 7):

3. Homogeneous (or constant) variance (based on 1.1).
4. Normality of variance based on (1.2) and (1.3).

In examining the residual plots, the researcher looked only at the first column of graphs. She found:

(1,1) Residual plot: there are 5 lines, if you connect the dots. This is because the responses are 5 categories. So, the big takeaway was that the averages are all around 0.

(2,1) QQ-plot: points are aligned along the diagonal. Therefore, normality assumption is satisfied.

(3,1) histogram: the blue line is the ideal normal distribution, based on the data. And from the graph, it appears there is some overlap.

Table 24. R-Square and Response Mean for Physical Evidence

R-Square	Coeff Var	Root MSE	Response Mean
0.120856	65.20564	1.890964	2.900000

R-Square: 12.0856% variation in my response can be explained by the linear model (as shown in table 24).

Root MSE (mean Squared Error): 1.890964 ^2 is the constant variance in the model. The equation employed was:

$$Y = X\beta + \epsilon, \epsilon \sim N(0, \sigma^2), \hat{\sigma}^2 = 1.890964^2$$

Table 25. Standard Error for Physical Evidence

Parameter	Estimate		Standard Error	t Value	Pr > |t|
Intercept	4.275362319	B	0.16096951	26.56	<.0001
group_index 0	-1.500000000	B	0.22764526	-6.59	<.0001
group_index 1	-1.768115942	B	0.22764526	-7.77	<.0001
group_index 2	-1.876811594	B	0.22764526	-8.24	<.0001
group_index 3	-1.731884058	B	0.22764526	-7.61	<.0001
group_index 4	0.000000000	B	.	.	.

For this analysis, as shown in table 25, the researcher tested groupIndex0, so the above model explains the groupIndex 0,1,2,3,4. The p-value tests whether the estimate is significantly different from 0 or not. The supporting equation is:

$$Y = 4.275362319 + (-1.5) * \text{group}_{\text{index0}} + (-1.768115942) * \text{group}_{\text{index1}} + \cdots (-1.731884058) * \text{group}_{\text{index3}}$$

Table 26. Sum of Squares for Physical Evidence

Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	4	336.715942	84.178986	23.54	<.0001
Error	685	2449.384058	3.575743		
Corrected Total	689	2786.100000			

Assuming alpha equals 0.05, P-value ≤ .0001 in the table 26 the results indicate the estimate was significantly different from 0. The researcher concluded, based on the findings of the data analysis, that there was a statistically significantly difference for each adjacent value in the sorted averages for the sub-levels of the Physical Evidence group.

Table 27. Tukey Grouping and Means for Physical Evidence

Means with the same letter are not significantly different.			
Tukey Grouping	**Mean**	**N**	**group_index**
A	4.2754	138	4
B	2.7754	138	0
B			
B	2.5435	138	3
B			
B	2.5072	138	1
B			
B	2.3986	138	2

In the analysis, as shown in table 27, the researcher grouped the sub-levels of Physical Evidence as 0=more social activities; 1= active nightlife activities; 2=housing available; 3=provide daycare service; 4=better facilities.

Tukey's Studentized Range (HSD) Test for response showed that

$$\mu_{\text{Housing available}} < \mu_{\text{active nightlife activities}} < \mu_{\text{Provide daycare services}} < \mu_{\text{more social activities}} < \mu_{better\ facilities/buildings}$$

The mean of better facilities/buildings was found to be significantly different from all other sub-levels tested. Thus, the means for more social activities, active nightlife activities, housing available, and provide daycare service were not significantly different.

4.10 Research Question 7: Process

RQ7. Does Process influence nontraditional students' enrollment and choices decisions?

The following equation was used to determine statistically significant relationships.

Define μ_{score} = mean of responses for question 8 on our survey. Then

$$\text{H0: } \mu_{score} \leq 4$$

Analysis of the data revealed no statistically significant relationship between process and nontraditional student perceptions and choices.

Next, I tested for:

$$\text{H1: } \mu_{score} > 4$$

In this instance, there appeared to be a statistically significantly relationship between Process and nontraditional student perceptions and choices. Responses from participants who appeared to have been confused in answering the last question (on ranking) were included for this subsequent analysis. Further, I removed rows with missing variables in all analyses. Since only one question on the survey dealt with a marketing variable (i.e., question 8 on the survey), it was appropriate to employ a 1-sample T-Test to see if the average of the responses was statistically higher than 0.

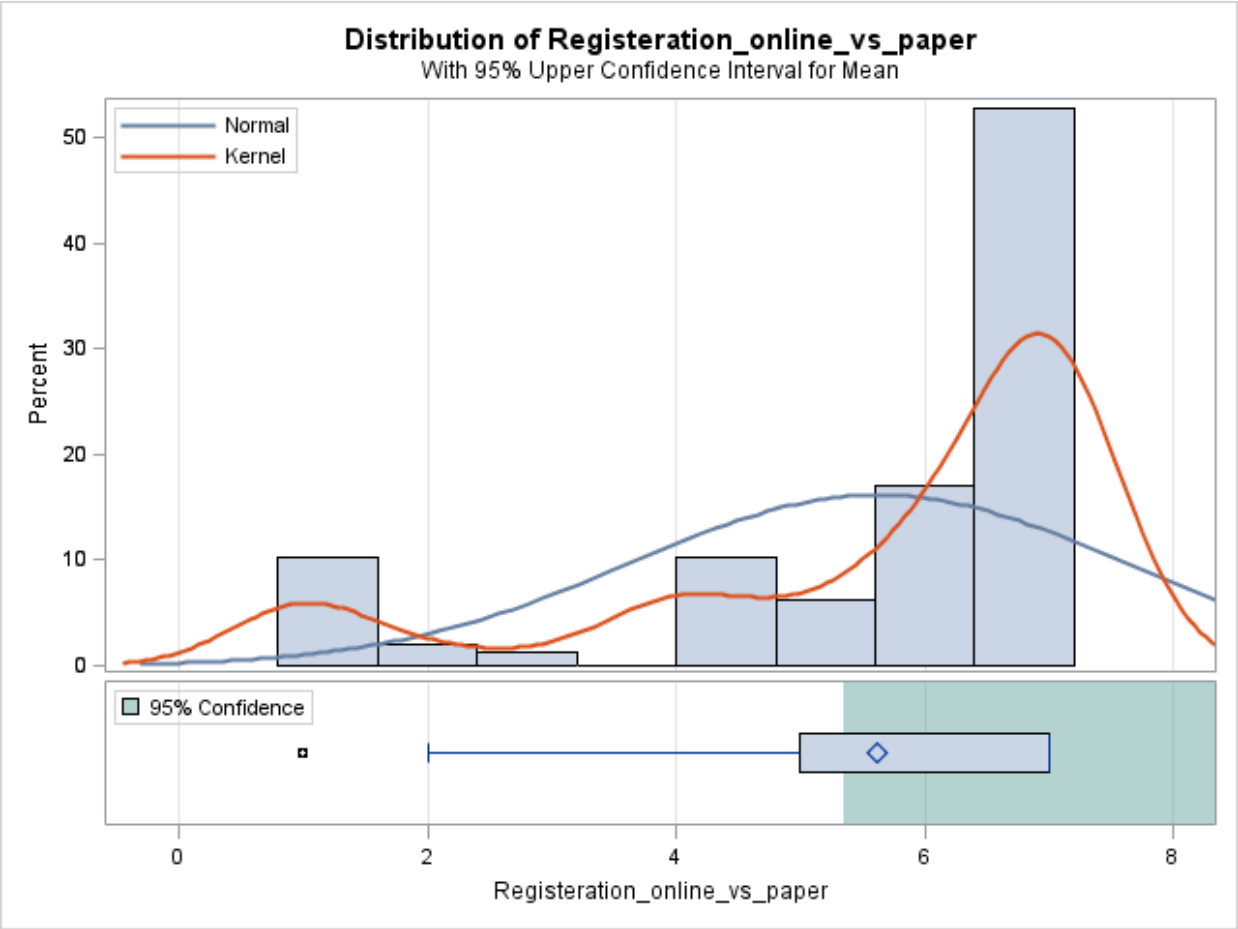

Figure 8. *1-Sample T-Test for Process*

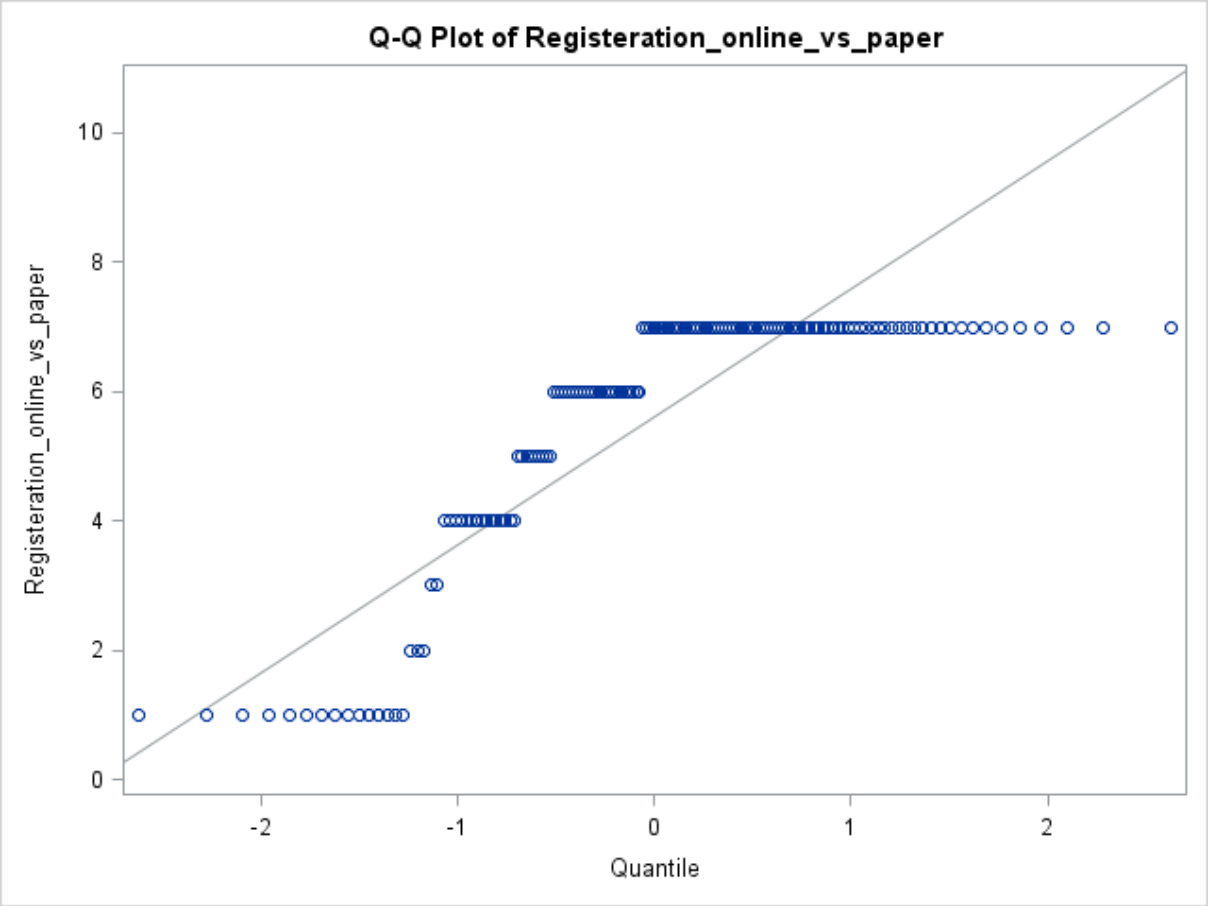

Figure 9. *Q-Q Plot for Process*

Here we look at the distribution of responses. In Figure 8, the closer the red line (the fitted line graph to your data) to the blue line (the line graph of a normal distribution), the more appropriate the model. There were 146 responses which circumvented this need.

In Figure 9, the findings were like the distribution illustrated in the preceding graph. However, T-test is robust to normality assumption. Thus, the model was found to be appropriate.

Table 28. T-Test for Process

Variable: Registration_online_vs_paper

N	Mean	Std Dev	Std Err	Minimum	Maximum
146	5.6233	1.9762	0.1636	1.0000	7.0000

Mean	95% CL Mean		Std Dev	95% CL Std Dev	
5.6233	5.3525	Infty	1.9762	1.7726	2.2331

DF	t Value	Pr > t
145	9.93	<.0001

In the analysis, n=146, mean=5.6233, P-value =<0.001 (as shown in table 28). Based on the findings, one may conclude there is a statistically significant relationship between Process and nontraditional student perceptions and choices.

4.11 Research Question 8: Employer Role

RQ8. Does the employer play an important role in influencing nontraditional student perceptions and choices?

This referenced responses to question 21 on the survey. There were 148 respondents, but the data set had 141 observations and 1 variable. I used a 1-sample T-Test to see if the average of the responses was statistically higher than 4 or not.

H0: $\mu_{Supportive\ score} \leq 4$

If true, there would not be a statistically significantly relationship between employer and nontraditional student perceptions and choices.

H1: $\mu_{supportive\ score} > 4$

If this case, if true, there would be a statistically significantly relationship between employer and nontraditional student perceptions and choices.

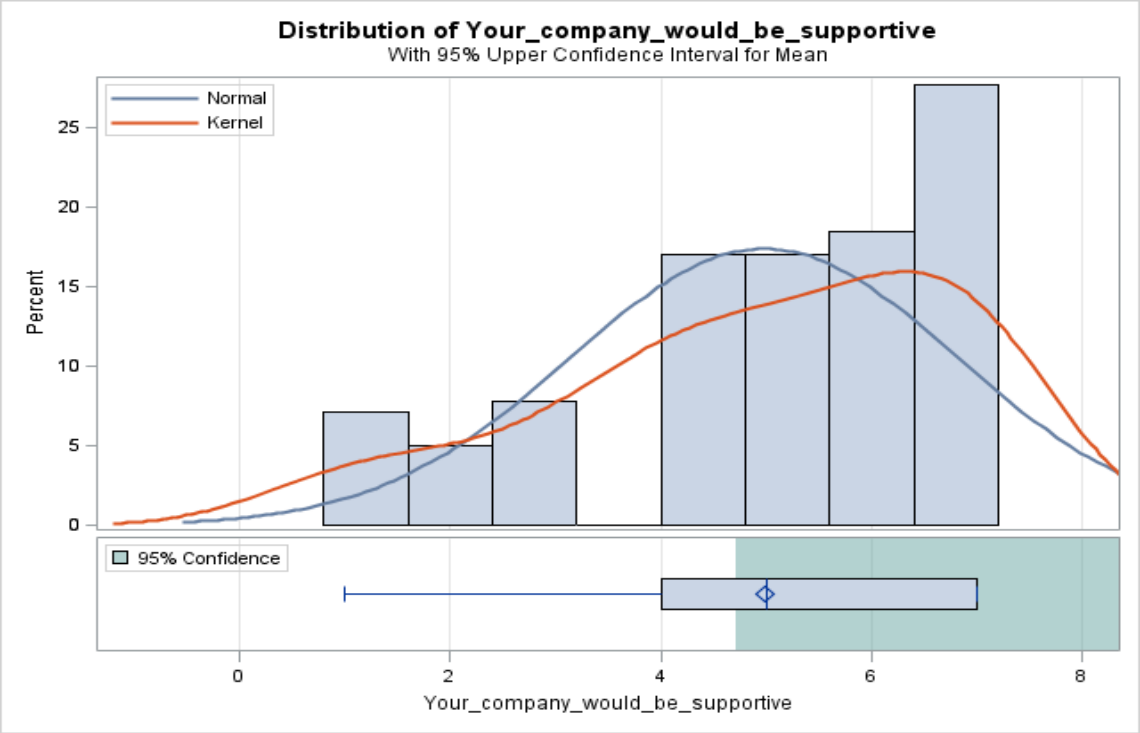

Figure 10. *Residual Plot for Employer Role*

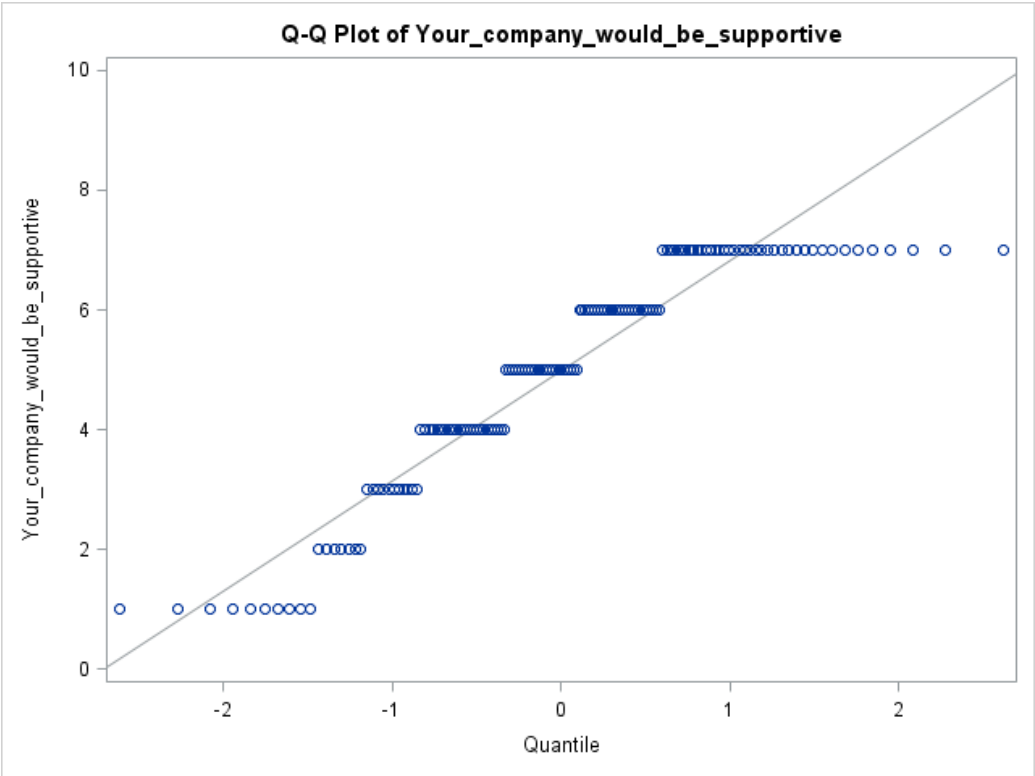

Figure 11. *Q-Q Plot for Employer Role*

According to the Residual plot, the closer the red line (the fitted line graph to your data) to the blue line (the line graph of a normal distribution), the more appropriate the model is (as shown in figure 10). The 141 responses permit us to circumvent this need.

The Q-Q Plot (as shown in figure 11) presents results that are like those illustrated in the Residual Plot. However, T-test was robust for the normality assumption. Thus, model was therefore deemed appropriate.

Table 29. The T-Test Procedure for Relationship between Employer Role and Nontraditional Student Perceptions and Choices

N	Mean	Std Dev	Std Err	Minimum	Maximum
141	4.9787	1.8380	0.1548	1.0000	7.0000

Mean	95% CL Mean		Std Dev	95% CL Std Dev	
4.9787	4.7224	Infty	1.8380	1.6456	2.0817

DF	t Value	Pr > t
140	6.32	<.0001

In the analysis, n=141, mean=4.9787, P-value =<0.001 (as shown in table 29), so the researcher concluded there was a statistically significantly relationship between employer role and nontraditional student perceptions and choices in pursuing a higher education degree.

4.12 Summary

This chapter presented data gathered from the survey and data analysis. A total of 148 surveys participated in evaluation of non-traditional student perception towards to college degree decision making. The pre- and post-training responses were presented by participant (numbered C1-C5, A1-A5).

RQ1. Does Product influence nontraditional students' enrollment and choices decisions? "General knowledge that will apply to my future career" is not statistically significantly different from the mean score of "content that will be related to my work". In other words, there were not statistically significantly different between sub-variables under Product.

RQ2. Does Price influence nontraditional students' enrollment and choices decisions? An analysis of the findings suggested that the means for Scholarship, under $3k, and $3k-$5k, were significantly significant. However, the means for $5k-$8k, $8k-$10k and over $10k were not significantly significant.

RQ3. Does Place influence nontraditional students' enrollment and choices decisions? Based on the findings, the researcher concluded there was a statistically significantly difference for each adjacent value in the sorted averages of the level of the Place group. Analysis of the data resulted in a finding of no significant difference among the sub-levels for Place. The mean of within 10 miles of my home or workplace and flexible with work online are not significantly different; the mean of flexible with work online, flexible with work in the evenings, and flexible with work on the weekend are not significantly different; the mean of flexible with work in the evenings, flexible with work on the weekend, and nearby work with the distance in 30 minutes are not significantly different; the mean of within my state, nearby work with the distance in 60 miles, and outside the state where I reside are not significantly different.

RQ4. Does Promotion influence nontraditional students' enrollment and choices decisions? Assuming alpha equals 0.05, P-value $\leq$ .0001, the table above shows that the estimate is significantly different from 0. One may therefore conclude a statistically significantly difference for each adjacent value in the sorted averages of the sub-levels of the Promotion group. However, an analysis of the findings no significant difference for any of the sub-level means.

RQ5. Does People influence nontraditional students' enrollment and choices decisions? Based on the findings, the researcher concluded there was a statistically significantly difference for each adjacent value in the sorted averages of the sub-levels of the People group. However, the findings indicated no statistically significant difference among the sub-levels of People. The means for professor with real-world experience, staff members who know policies and procedures very well, and support of your spouse or significant other were not significantly different. Likewise, the means of your company would be supportive, and professor with real-world experience were not significantly different.

RQ6. Does Physical Evidence influence nontraditional students' enrollment and choices decisions? Based on the findings of the data analysis, that there was a statistically significantly

difference for each adjacent value in the sorted averages for the sub-levels of the Physical Evidence group.

RQ7. Does Process influence nontraditional students' enrollment and choices decisions? Based on the findings, we may conclude there is a statistically significant relationship between Process and nontraditional student perceptions and choices.

RQ8. Does the employer play an important role in influencing nontraditional student perceptions and choices? Based on the data, the researcher concluded there was a statistically significantly relationship between employer role and nontraditional student perceptions and choices in pursuing a higher education degree.

The next chapter provides recommendations on marketing strategy in higher education and conclusions of this study, discusses implications for future study related to nontraditional students in higher education.

CHAPTER 5. RECOMMENDATIONS AND CONCLUSIONS

This chapter offers recommendations and conclusions, including the discussion of findings, recommendations, implications for future research related to nontraditional student marketing strategy in higher education.

5.1 Discussion of Findings

The research questions for this study were as follows:

1) Does Product influence nontraditional students' enrollment and choices decisions?
2) Does Price influence nontraditional students' enrollment and choices decisions?
3) Does Place influence nontraditional st**u**dents' enrollment and choices decisions?
4) Does Promotion influence nontraditional students' enrollment and choices decisions?
5) Does People influence nontraditional students' enrollment and choices decisions?
6) Does Physical Evidence influence nontraditional students' enrollment and choices decisions?
7) Does Process influence nontraditional students' enrollment and choices decisions?
8) Does the employer play a significant role in influencing nontraditional students' enrollment and choices decisions?

5.1.1 Does Product influence nontraditional students' enrollment and choices decisions?

The data to address this research question were obtained from responses to Question #6 of the survey: "general knowledge that will apply to my future career vs content that will be related to my future work".

The researcher utilized R square to test if the mean score for General Knowledge was statistically different from the mean score of Content. She received responses from 140 of 148 responses to this question. The P-value was equal to 0.8843. This value was greater than alpha 0.05, which supported the conclusion that "General knowledge that will apply to my future career" was not statistically different from the mean score of "Content that will be related to my work".

This finding showed that the nontraditional student expects that the curricula/program will cover both general knowledge that will apply to their future career and classroom content that will be related to their future work as well.

5.1.2 Does Price influence nontraditional students' enrollment and choices decisions?

In this question, the researcher received responses from 120 of 148 responses. Respondents were asked to rank order six levels of Price as measured by amount of Scholarship:

- Scholarship under $3,000;
- Scholarship $3,000-$5,000;
- Scholarship $5,000-$8,000;
- Scholarship $8,000-$10,000;
- Scholarship over $10,000.

The researcher employed Tukey's Studentized Range (HSD) Test and R-Square test to determine if there were differences in the sorted averages of each level of the Price variable, and if the differences were statistically significant.

The results of the tests indicated there were statistically significant differences in the sorted averages of the Price sublevels. The responses, in order from highest impact to lowest impact were: Scholarship under $3,000, $3,000-$5000, $5000-$8000, $8000-$10000; and over $10,000. The equation employed was:

$$\mu_{Over\ \$10k} < \mu_{\$8k-\$10k} < \mu_{\$5k-8k} < \mu_{\$3k-\$5k} < \mu_{Under\ \$3k} < \mu_{Scholarship}$$

The differences in the means of Scholarship under $3000 and $3000-$5000 were statistically significant. However, the differences in the means of the remaining levels were not found to be statistically significant. These findings suggested that non-traditional students preferred incentives such as scholarships up to $5,000 in large part because they were more realistically obtainable. This survey did not inquire into perceptions as to the costs of a higher education degree because of the great variability of programs and institutions. In this analysis, it suggested that scholarship, assistantship, and/or other types of funding (up to $5000), is very attractive to nontraditional student's enrollment and choices decisions.

5.1.3 Does Place influence nontraditional students' enrollment and choices decisions?

Questions #16 and #17 on the survey reflected responses to this research question. The researcher received responses from 135 of 148 respondents. Place was measured by eight levels of location:

- Within levels 10 miles from home or work;
- Within a 30-minute drive to home or work;
- Within 60 miles of home or work;
- Within the state where respondent resides;
- Outside the state in which respondent resides;
- Flexible weekend work schedule;
- Flexible evening work schedule; and
- Flexible online work.

The researcher tested for statistically significant differences among the means of the levels for Place. SAS analysis indicated no statistically significant differences in the sorted averages of the various levels of the Place variable. Tukey's Studentized Range (HSD) Test revealed how they were statistically different. The equation employed was:

$$\mu_{\text{outside the state where I reside}} < \mu_{\text{nearby work with the distance in 60 miles}} < \mu_{\text{within my state}}$$
$$< \mu_{\text{nearby work with the distance in 30 mins}} < \mu_{\text{flexible with work on the weekend}}$$
$$< \mu_{\text{flexible with work in the evenings}} < \mu_{\text{flexible with work online}}$$
$$< \mu_{\text{within 10 miles of my home or workplace}}$$

Respondents ranked the relative importance of each level as follows:

1. Within 10 miles of home or work
2. Flexible online work
3. Flexible evening work schedule;
4. Flexible weekend work schedule;
5. Within 30-minute drive to home or work;
6. Located within the state in which I reside;

7. Within 60 miles of home or work; and
8. Outside the state in which I reside.

While the differences in the means for each item were not found to be statistically significant, respondents indicated that proximate distance of the university campus and classes in relation to their homes and places of work was, on average, a crucial consideration. The second highest factor cited by respondents was the flexibility afforded by online classes. This finding suggested that the nontraditional students prefer a university or college where is within a 10 mile radius or 30 minutes or less commuting time.

5.1.4 Does Promotion influence nontraditional students' enrollment and choices decisions?

This relationship was explored through Questions #9-#14 on the survey. The researcher received responses from 132 of 148 respondents. There were seven levels of Promotion:

- Attending a well-known university versus a community college;
- Receiving more information regarding programs;
- Attending an open house or seminar;
- Obtaining information via online website;
- Obtaining information via phone calls or emails;
- Listening to radio broadcasts and advertising about the programs; and
- Watching an ad, commercial or program offering on television.

The researcher tested for statistically significant differences among the means. The equation I used was:

$$\begin{aligned}\mu_(obtain\ information\ via\ phone\ calls\ or\ emails) &< \mu_(watching\ TV)\\ &< \mu_(listening\ to\ radio) < \mu_(open\ house\ or\ seminar)\\ &< \mu_(received\ more\ information\ regarding\ programs)\\ &< \mu_(obtain\ information\ via\ online)\\ &< \mu_(well-known\ university\ instead\ of\ a\ community\ college)\end{aligned}$$

Respondents ranked the importance of the levels of Promotion as follows:

1. Attending a well-known university instead of a community college
2. Obtaining information via online
3. Receiving more information regarding programs
4. Attending an open house or seminar
5. Listening to radio broadcasts or advertising about the programs;
6. Watching an ad, commercial or program offering on television.
7. Obtaining information via phone calls or emails.

The differences in the means for each of the levels of Promotion were not statistically significant. However, respondents indicated they were more likely to respond favorably to advertising and program information that emphasized university and program ranking. Additionally, respondents perceived online advertising and program information to be of higher value than other forms (i.e., radio, television, email, phone calls, seminars and open houses, etc.). Their responses indicated a preference to attend highly ranked universities and programs and to view information online at a time and in a manner of their own choosing.

5.1.5 Does People influence nontraditional students' enrollment and choices decisions?

Questions #18-#21 of the survey addressed this relationship. I received responses from 127 of 148 respondents. There were five levels of People identified:

- Professor with real-world experience;
- Professor with a strong theoretical or academic background;
- Staff members who know and understand policies and procedures very well;
- Support of spouse or significant other; and
- Support from employer.

The researcher tested for statistically significant differences among the means for the levels for People. The researcher employed Tukey's Studentized Range (HSD) Test to determine the degree to which they may be statistically significant. The equation used was:

$$\mu_{\text{professor with a strong theoretical or academic background}} < \mu_{\text{your company would be supportive}}$$
$$< \mu_{\text{your spouse or significant would be supportive}}$$
$$< \mu_{\text{Staff members who know policies and procedures very well}}$$
$$< \mu_{\text{professor with real-world experience}}$$

Responses indicated the following rank ordering of the People sublevels:

1. Professor with real-world experience;
2. Staff members who knew policies and procedures well;
3. Support of spouse or significant other;
4. Support of employer; and
5. Professor with a strong theoretical or academic background.

The differences in the means for the five levels of People variable were not statistically significant. However, responses and rank ordering by nontraditional students suggested that Professors with real world experience; informed staff; and support from spouse/significant other were important factors in deciding whether to pursue a higher education degree.

5.1.6 Does Physical Evidence influence nontraditional students' enrollment and choices decisions?

To address this, Question #15 in the survey was used to test the relationship. The researcher received responses from 138 of 148 respondents. There were 5 levels of Physical Evidence:

- Social activities,
- Active nightlife activities,
- Housing availability,
- Daycare services provided, and
- Better facilities and buildings.

SAS analysis indicated the differences in the sorted averages among the levels measured for Physical Evidence were statistically significant. Tukey's Studentized Range (HSD) Test illustrated how statistically significant the differences were. The equation used was:

$\mu_{\text{Housing available}} < \mu_{\text{active nightlife activities}} < \mu_{\text{Privide daycare services}} < \mu_{\text{more social activities}} < \mu_{better\ facilities/buildings}$

Respondents rank ordered the variable sublevels as follows:

1. Better facilities and buildings
2. More social activities
3. Daycare services provided
4. Active nightlife activities
5. Housing availability

The differences among the means revealed that "better facilities/buildings" was statistically significant from all other levels of Physical Evidence. However, the differences in the means for the other four levels were not statistically significant. This finding suggested that nontraditional students perceived the quality of university facilities and buildings to be an important factor in deciding when and where to pursue a higher education degree.

5.1.7 Does Process influence nontraditional students' enrollment and choices decisions?

The data were captured in Question #8 of the survey: "I would prefer to do the application and registration online as opposed to do a paper application and registration." Since the researcher only had one question for one variable, she utilized a one sample T-test to test if the mean of the responses regarding the process of application and registration online versus paper was statistically higher than zero. For this question, the researcher received responses from 146 of 148 responses, which circumvented this need.

Regarding the analysis on process, the researcher tested to see if the mean was significantly greater than 4. Her assumption was that if the mean was greater than 4, the respondents were indicating they preferred an online registration. The choices were listed on a 1-7 Likert scale, with 1 being in favor of paper registration and 7 being in favor of online registration and 4 being indifferent since it was situated in the middle of the scale. The hypothesis test indicated that H1: mean was significantly greater than 4. Thus, the data indicated that respondents favored online registration to paper registration.

5.1.8 Does the employer play a significant role in influencing nontraditional student perceptions and choices?

Question #21 on the survey addressed this research question. The researcher received responses from 141 of 148 respondents. Because she was only assessing one variable, she used a one sample T-Test to see if the average of the responses was statistically higher than 0. Not surprisingly, the T-Test revealed a statistically significant relationship between employer support and the decision by nontraditional students to pursue a higher education degree. This finding suggested that employer support for plays an important role for working professionals enrolled as nontraditional students.

5.2 Recommendations

Considering the findings of this study, the following recommendations are made to assist higher education institutions in improving attraction, recruitment and retention of working professionals (i.e., nontraditional students).

1. Emphasize university ranking online and in all correspondence. Prestige of the institution was an important factor in influencing decisions to pursue a higher education degree.
2. Emphasize program ranking, accreditation, and national recognition. These are attractive to nontraditional students.
3. Streamline the Process to facilitate online application and registration.
4. Enhance online visibility, clarity of instructions, eligibility criteria, schedules, program information, etc., and accessibility to required forms.
5. Enhance program attractiveness by offering flexible schedules and online courses.
6. Maintain website and online information up to date.
7. Provide scholarships, assistantships, and/or other types of funding (up to $5,000), where feasible.
8. Ensure facilities, classrooms, labs, and buildings are easily accessible, well maintained, well-equipped, and up-to-date.
9. Target nontraditional students living and working within a 10 mile radius (30 minutes or less commuting time) for maximum results.
10. Profile university faculty with national/international prominence and real-world experience.

11. Ensure that staff are knowledgeable, well-informed, well-prepared, and accessible.
12. Encourage employer support for working professionals enrolled as nontraditional students. Forge long-term, mutually beneficial relationships with companies to strengthen the nation's workforce.

5.3 Implications for Future Research

In this study, the researcher should have run a CFA to confirm if the data fit this hypothesized measurement model before implementing A One-Way ANOVA and Tukey's Studentized Range (HSD) Test. She should have conducted confirmatory factor analysis (CFA) to test whether the 7P factors are consistent with her understanding of factors. In other words, the researcher needed to run a CFA to test whether the data fit the hypothesized measurement model before conducting the following potential research questions. Therefore, there are two potential questions can be explored for furfure study.

5.3.1 Potential Research Question 1: 7Ps Marketing Mix

Analysis of the full survey results will proceed by examining responses that addressed each research questions.

Potential RQ1: Is the 7P marketing mix a viable theoretical lens through which to examine nontraditional student attitudes, perceptions, and choices?

To answer the potential RQ1, the researcher attempted to find the sorted averages of the ranks of the groups statistically significantly different from each adjacent value. In other words, the researcher wanted to know if the average of the ranks for at least one group were the same or different. A One-Way ANOVA was implemented to solve potential RQ1.

$$y_{ij} = \mu + \alpha_i + \epsilon_{ij}, i = 1, \dots, 7, j = 1, \dots, 148$$

Where:

y: assigned rank scores= {1,2,3,4,5,6,7}

μ: Grand mean

α_i:7Ps with 7 levels

$\epsilon_{ij} \sim N(0, \sigma^2)$, i.e. homogeneous variance.

There are 7 levels of marketing factors to be considered: curricula/programs (Product), tuition fees (Price), flexible schedules (Process), distance from campus (Place), academic reputation (Promotion), knowledge of faculty (People), helpful staff (Physical Evidence). In this data, there were 148 respondents, but 28 responses provided invalid data. Therefore, 28 rows of observations for ranking 7 independent variables were deleted, which resulted in a total of 120 observations for 7 groups. The researcher proceeded by looking at the residual plots to assess validity of the model assumptions.

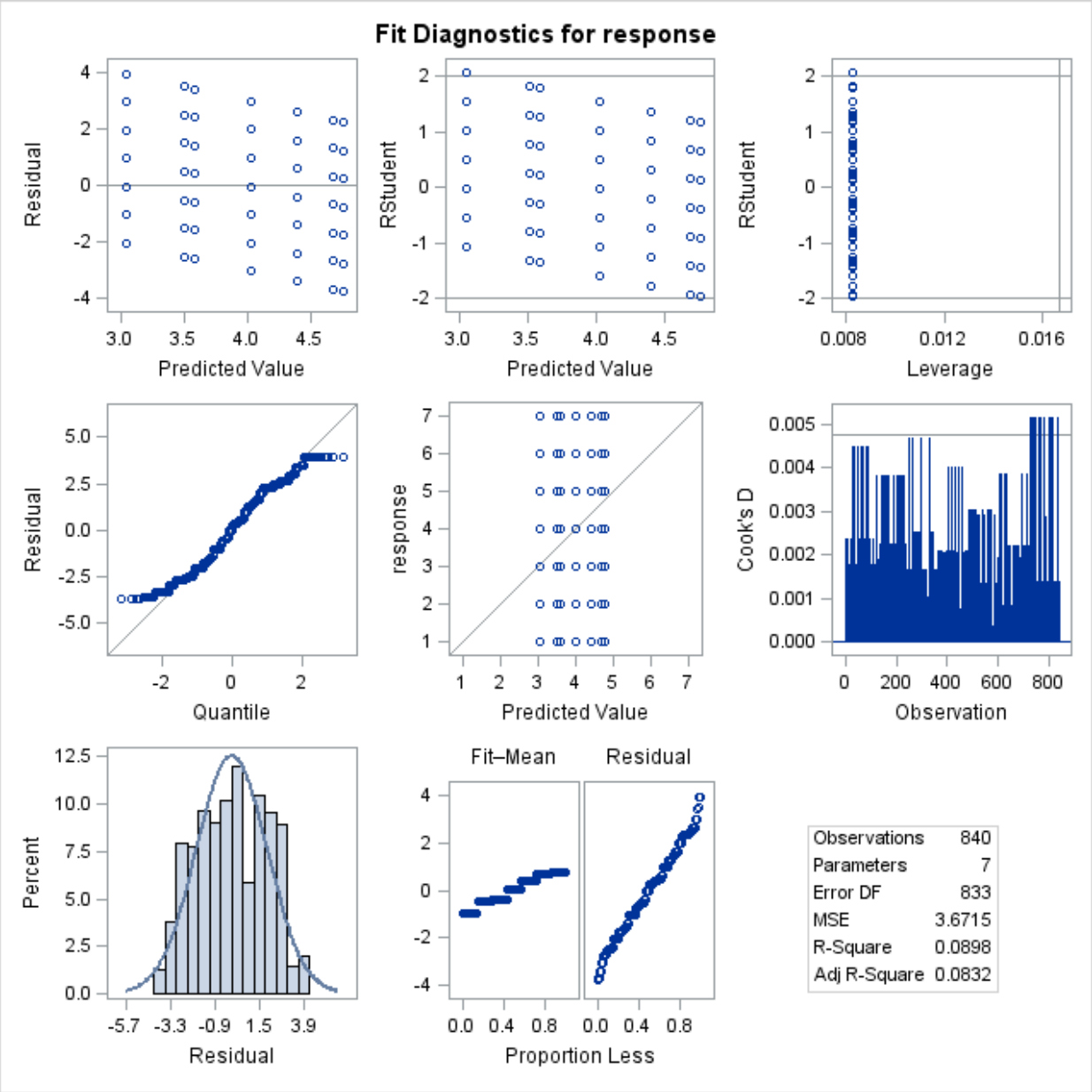

Figure 12. *Residual Data Plots*

Looking at the first column of graphs, assumptions were based on homogeneous (or constant) variance (1.1), and Normality of variance (1.2) & (1.3) (as shown in figure 12). From the residual plots, there are 7 lines, if you connect the dots. This is because the responses are 7 categories. The big takeaway from this analysis was that the averages seemed to cluster near or around 0.

H0: all the means are the same

H1: at least one of the means is different form the other groups?

Table 30. One-Way ANOVA Table

Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	6	301.666667	50.277778	13.69	<.0001
Error	833	3058.333333	3.671469		
Corrected Total	839	3360.000000			

Based on the results presented in Table 30 and assuming alpha equals 0.05, P-value ≤ .0001, there appeared to be a statistically significant difference for at least one of the groups.

Next, I conducted a post-hoc analysis to see to what degree of the sorted averages of the ranks were statistically significant.

For example:

$$\mu_{product} \leq \mu_{price} \leq \mu_{promotion} \leq \cdots$$

Where $\mu_{product}$ is the average of the ranks for product? An example of a hypothesis test would be:

H0: is $\mu_{product} = \mu_{price}$

H1: is $\mu_{product} \leq \mu_{price}$

But I also needed to do pairwise comparisons at the same time. Therefore, the researcher conducted a Tukey's Studentized Range (HSD) Test for response.

Table 31. Tukey's Studentized Range (HSD) Test for Responses

The SAS System

The GLM Procedure

Tukey's Studentized Range (HSD) Test for response

Alpha	0.05
Error Degrees of Freedom	833
Error Mean Square	3.671469
Critical Value of Studentized Range	4.17979
Minimum Significant Difference	0.7311

It should be noted that this test controls the Type I experiment-wise rate, but it generally has a higher Type II error rate than REGWQ (as shown in table 31).

Table 32. Tukey Grouping of Means

Means with the same letter are not significantly different.

Tukey Grouping		**Mean**	**N**	**group_index**
	A	4.7583	120	3
	A			
B	A	4.6833	120	1
B	A			
B	A	4.3917	120	2
B				
B	C	4.0250	120	5
	C			
D	C	3.5833	120	6
D	C			
D	C	3.5083	120	4
D				
D		3.0500	120	7

For this analysis, the researcher grouped the 7Ps as follows: 1= Product; 2=Price; 3=Process;4=Promotion; 5=Physical Evidence; 6=Place; 7=People.

Tukey's Studentized Range (HSD) Test for responses was expressed by the following equation:

$$\mu_{people} < \mu_{promotion} < \mu_{place} < \mu_{physical\ evidence} < \mu_{price} < \mu_{product} < \mu_{process}$$

The results of this analysis indicated that (as shown in table 32) the means for People, Promotion, and Place were not significantly different. In addition, the means for Promotion, Place, and Physical Evidence were not significantly different. The means for Physical Evidence, Price, and Product were not significantly different. And finally, the means for Price, Product, and Process were not significantly different.

5.3.2 Potential Research Question 2: Influential Factors

Potential RQ2. Which of the marketing mix factors have the strongest influence on nontraditional students' interest in pursuing a higher education?

This references responses to questions 2 and 22 on the survey. The researcher did not include responses of "No" for this question, indicating they had no intention of pursing higher education or a new degree at this point in time. The researcher ran the analysis for responses of "Yes and Maybe", "Yes", or "Maybe" to see which factor represented the greatest influence on nontraditional students' interest in pursuing a higher education. The researcher compared responses across 7 sub-levels for Interest: 1=curricula/programs (Product), 2= tuition fees (Price), 3=flexible schedules (Process), 4=distance from campus (Place), 5=academic reputation (Promotion), 6=knowledge of faculty (People), 7=helpful staff (Physical Evidence), be analyzed.

Table 33. Interest in Pursuing a Higher Education Degree

Interest in Pursuing a degree	**Frequency**	**Percent**	**Cumulative Frequency**	**Cumulative Percent**
Maybe	42	35.29	42	35.29
No	39	32.77	81	68.07
Yes	38	31.93	119	100.00

There were 148 respondents originally. The researcher removed 6 rows of data since there were no responses for question 22. I also removed 23 additional rows since they did not

rank the 7Ps properly. Ultimately, this resulted in 42 responses of “Maybe”, 39 responses of “No” and 38 responses of “Yes” (as shown in table 33).

For people who answered YES or MAYBE to pursuing higher education:

Table 34. Tukey Grouping for Yes/Maybe

Means with the same letter are not significantly different.				
Tukey Grouping		**Mean**	**N**	**group_index**
	A	4.8500	80	3
	A			
	A	4.8375	80	1
	A			
	A	4.4250	80	2
	A			
B	A	4.0625	80	5
B				
B	C	3.4500	80	4
B	C			
B	C	3.4375	80	6
	C			
	C	2.9375	80	7

The data in the table 34 suggests that for nontraditional students (i.e., working professionals) who answered YES or MAYBE to pursuing higher education, the most important factor was 3 or Process. However, while important, it was not found to be statistically different from indices 1, 2 and 5.

For people who answered MAYBE to pursuing a higher education degree:

Table 35. Tukey Grouping for Maybe

Means with the same letter are not significantly different.				
Tukey Grouping		**Mean**	**N**	**group_index**
	A	4.5476	42	3
	A			
	A	4.5238	42	2
	A			
	A	4.5000	42	1
	A			
B	A	3.9048	42	5
B	A			
B	A	3.7143	42	6
B	A			
B	A	3.6190	42	4
B				
B		3.1905	42	7

From the table 35, the researcher concluded that for people who answered MAYBE to pursuing a higher education, 3 or Process was most important, but it was not found to be statistically different from indices 2 (price), 1(product), 5(promotion), 6 (people) and 4(place).

3). For people who answered YES to pursuing higher education:

Table 36. Tukey Grouping for YES

Means with the same letter are not significantly different.				
Tukey Grouping		**Mean**	**N**	**group_index**
	A	5.2105	38	1
	A			
	A	5.1842	38	3
	A			
B	A	4.3158	38	2
B	A			
B	A	4.2368	38	5
B				
B	C	3.2632	38	4
B	C			
B	C	3.1316	38	6
	C			
	C	2.6579	38	7

From the table 36, the researcher concluded that for people who answered Yes to pursuing higher education: 1 or Product was most important, but it was not statistically different from indices 3(process), 2(price) and 5(promotion).

Furthermore, this study was limited to employees of three companies located in Indiana affiliated with Subaru (SIA). The sample size of 148 respondents further limited generalizability of the study. Future research around nontraditional student interests in pursuing higher education degrees should include a larger sample size and a more diverse group. A national survey would produce more reliable data which could better inform institutions of higher education on what factors influence and attract nontraditional students.

Focus groups could provide rich data and information on perceptions and choices by nontraditional students that could lead to improvements in communication and marketing of programs, but also in redesigning programs to meet the needs of nontraditional students. Interviews with nontraditional students currently enrolled in institutions of higher education

would provide vital information on what attracted to them to their program/institution, support and resources that have been most helpful to them, and areas for improvement.

Finally, future research in this area could delve deeper into why some programs and institutions are more successful than others in marketing to, attracting, recruiting, and retaining nontraditional students. This could provide valuable insight into the future direction of nontraditional student educational offerings.

5.4 Summary

To better attract and serve the adults population, higher education institutions need to understand how the marketing mix works, so they may adapt and adopt more successful marketing strategies. The 7Ps marketing mix is a valuable tool to help academic institutions improve the quality of the programs and services they wish to offer to nontraditional students, particularly working professionals.

In this study, the researcher explored the relationship between the 7Ps marketing mix and perceptions and choices of working professionals seeking to pursue a higher education degree. Invitations to participate were sent out to several thousand employees working for three companies in Indiana, affiliated with Subaru (SIA). She received 148 responses to the survey.

The findings suggested that Process and Product were of paramount importance to working professionals considering the pursuit of a higher education degree. Quality and accessibility of programs and institutions were critically important in influencing decisions to apply to a program or university. Of interest was national ranking (prestige and impact) of the university and the program they were considering. Availability of online information was preferred over other types of marketing strategies. Therefore, maintaining current information on a website was an important factor in influencing their decisions. Likewise, the ease with which prospective nontraditional students could apply and register online, and take courses online were important factors in their decision-making process.

Commuting time (location of campuses and classes from home or work) was important, as most preferred a commuting time of 30 minutes or less. Flexibility of course schedules was attractive to nontraditional students. Furthermore, respondents indicated a preference for working with knowledgeable staff and faculty with real world experience. Support from employers and family was equally important.

Recommendations were made that may prove useful to institutions of higher education seeking to improve, expand, or refine their program offerings and marketing campaigns in order to appeal to nontraditional students.

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APPENDIX A. IRB APPROVAL

-----Original Message-----
From: coeus-system@lists.purdue.edu <coeus-system@lists.purdue.edu>
Sent: Thursday, June 15, 2017 4:34 PM
To: Naimi, Linda L <lnaimi@purdue.edu>; Landrum, Jianping S <song126@purdue.edu>; Braun, Dana M <braun10@purdue.edu>
Subject: IRB Protocol 1706019312 (PI: NAIMI, LINDA L) - EXEMPTION GRANTED

SYSTEM GENERATED EMAIL - PLEASE DO NOT REPLY

The IRB Exemption Request for the referenced study has been accepted and the activity determined to be Exempt.

HRPP-IRB –

FINDING IRB CORRESPONDENCE
o The IRB correspondence for your protocol can be found in the protocol under Protocol History from the left hand side of the screen, at the View History tab.
o Expand on the Action you want to review (Approval, Revision, etc.) near the top/center of the view field, by clicking the "plus" sign.
o Below will appear a section containing "Correspondences". This is in WHITE font, so may be hard to see.
o Under Correspondences, select "View" to see the Letter that you want to see. "View" is in small font, toward the middle of the screen.

Protocol #:	1706019312
Sequence #:	1
Investigator:	NAIMI, LINDA L
Co-Investigator:	Landrum, Jianping S.
Title:	An Examination of Marketing Factors that Influence Nontraditional College Student Enrollment Decisions

Please use the link given below for the project details.

You can view this protocol through CoeusLite at the following address: https://coeus.itap.purdue.edu/coeus/getProtocolData.do?SEARCH_ACTION=SEARCH_WINDOW&protocolNumber=1706019312&PAGE=G&sequenceNumber=1

For Assistance with CoeusLite, please contact coeushelp@purdue.edu

APPENDIX B. PERMISSION TO CONDUCT SURVEY AT OERLIKON

From: Perez, Mila (Oerlikon Fairfield)
To: Jianping Landrum
Subject: Seeking your assistance
Date: Monday, April 17, 2017 2:05:36 PM
Attachments: Survey Questions format.docx

Hi Jianping,

It's nice to hear from you. It's been well, still crazy busy but things seem to be looking up a bit. How about you?

Happy to help with your survey. What did you have in mind? Will you be sending directly to respondents?

Best regards and all the best to
you, Mila

From: Jianping Landrum [mailto:song126@purdue.edu]
Sent: Monday, April 17, 2017 11:07 AM
To: Perez, Mila (Oerlikon Fairfield) <Mila.Perez@oerlikon.com>
Subject: Seeking your assistance

Hello Mila,
Hope everything goes well?
I am writing this email to ask your permission to conduct survey study in Oerlikon Fairfield for my Ph.D. dissertation, which is the same as I conduced study in Fairfield for my Master Degree . My study is about Marketing Strategy for Non-traditional Students in Higher Education. I do not ask for any personal information and the participation is absolutely confidential.
I am attaching my draft of survey questions here for you to review. Thank you so much and look forward to hear from you.
Jianping

APPENDIX C. PERMISSION TO CONDUCT SURVEY AT OSCARWINSKI

From: Bronchik, Jim
To: Jianping Landrum
Subject: Re: Introduction
Date: Thursday, April 13, 2017 1:28:16 PM

Jianping, have a nice weekend too. I will talk to you again in a couple of weeks.

Jim Bronchik
Vice President of Administration
Oscar Winski Company
2407 N 9th Street Lafayette,
IN 47903-4337
(765) 742-1102 -- extension 239
email: bronchikj@oscarwinski.com

From: Jianping Landrum [mailto:song126@purdue.edu]
Sent: Thursday, April 13, 2017 1:18 PM
To: Bronchik, Jim
Subject: RE: Introduction

That is fantastic. Thank you so much! Have a nice long weekend.
Jianping

From: Bronchik, Jim [mailto:bronchikj@OscarWinski.com]
Sent: Thursday, April 13, 2017 1:12 PM
To: Jianping Landrum <song126@purdue.edu>
Subject: RE: Introduction

We have about 30-50 individuals that would most likely complete the survey. I can email the survey to these individuals and have the responses come back to me. Then I would give you the hard copies. Please contact me about 2 weeks before you want the survey distributed. I will take care of everything for you at my company. Would that be okay?

Jim Bronchik
Vice President of Administration
Oscar Winski Company
2407 N 9th Street Lafayette,
IN 47903-4337
(765) 742-1102 -- extension 239
email: bronchikj@oscarwinski.com

From: Jianping Landrum [mailto:song126@purdue.edu]
Sent: Thursday, April 13, 2017 11:53 AM
To: Bronchik, Jim
Subject: RE: Introduction

Hello Mr. Jim,
There are 3 different approaches to conduct survey:

1. You/HR rep., send email out on my behalf, which can reach out all office associates.
2. I come over to handle out the hard copy to individual, so I can collect them right way.
3. Provide survey link via Purdue Qualtrics (Purdue tools, the same as Survey Monkey). Please let me know which ways work for your company.

In this study, the sample size would be 350 to make significant value.
I would like to start my survey late of May. Normally, It takes 2-3 weeks to get IRB approval.
Thank you very much for your help, Jianping

From: Bronchik, Jim [mailto:bronchikj@OscarWinski.com]
Sent: Thursday, April 13, 2017 11:34 AM
To: Jianping Landrum <song126@purdue.edu>
Subject: RE: Introduction

Jianping, please help me to understand –would you come here to conduct the survey? How many employees would you like to have participate? Would they complete the survey while you were here? Thank you.
Jim Bronchik

Vice President of Administration Oscar Winski Company
2407 N 9th Street Lafayette, IN 47903-4337
(765) 742-1102 -- extension 239 email:
bronchikj@oscarwinski.com

From: Jianping Landrum [mailto:song126@purdue.edu]
Sent: Thursday, April 13, 2017 8:29 AM
To: Bronchik, Jim
Subject: RE: Inttroduction

Hello Mr. Jim,

Thank you very much for your help. I used to work for Clem Strimel at Fairfield for several years. I am currently working at SIA and seeking my Ph.D study at Purdue.

I am looking for your permission to have access to the employees in Oscar Winski to conduct survey study for my Ph.D dissertation. I can take your permission to get IRB approval at Purdue before conducting survey. My study is about Marketing Strategy for Non-traditional Students Enrollment in Higher Education. I do not ask for any personal information and the participation is absolutely confidential. **The permission can be simply written: the permission is granted.** I am attaching my draft of survey questions here for you to review. Thank you so much and look forward to hear from you.

Jianping Landrum Supplier Quality Assurance
Subaru of Indiana Automotive
5500 St. Rd. 38 East, Lafayette, IN 47905
(765) 449-6212

From: Bronchik, Jim [mailto:bronchikj@OscarWinski.com]
Sent: Tuesday, April 11, 2017 8:11 AM
To: Jianping Landrum <song126@purdue.edu>
Subject: RE: Inttroduction

Jianping, I will be glad to help you in any way that I can do so. Please let me know what help you need.

Jim Bronchik

Vice President of Administration Oscar Winski Company
2407 N 9th Street Lafayette, IN 47903-4337
(765) 742-1102 -- extension 239 email: bronchikj@oscarwinski.com

---

From: Strimel, Clem
Sent: Monday, April 10, 2017 4:54 PM **To:** Jianping Landrum; Bronchik, Jim **Subject:** Inttroduction

Jianping,

I mentioned your project to Mr. Jim Bronchik (Vice President, Administration and Human Resources) and he would be willing to coordinate with you on how we might find some participants to support your PHD Project. Please feel free to introduce yourself to him and send the file. He will be responsive and let you know the best avenue.

Thanks
clem

Clement L. Strimel Jr.
Chief Operating Officer Oscar Winski Company, Inc.
2407 N 9th Street
P.O. Box 4337
Lafayette, IN 47903-4337
(765) 742-1102 Office
(765) 491-2190 Cell
email: strimelc@oscarwinski.com

APPENDIX D. PERMISSION TO CONDUCT STUDY AT THYSSENKRUPP

From: McChristian, Jarrod
To: Jianping Landrum
Subject: Re: Seeking your assistance
Date: Tuesday, April 18, 2017 8:24:54 Am

I authorize this study to assist you.

Regards,
Jarrod McChristian
Customer Support Manager
thyssenkrupp Industrial Services

T: +765-772-7469, M: +502-209-0777, Hotline: +1 (877) 854-7178, Jarrod.Mcchristian@thyssenkrupp.com
thyssenkrupp Materials NA, ThyssenKrupp Industrial Services, 4105 Haggerty Ln Lafayette, In 47905 www.tkmna.com

This e-mail (including any attachments) may contain confidential and/or privileged information. Any unauthorized

From: Jianping Landrum [mailto:song126@purdue.edu]
Sent: Monday, April 17, 2017 3:54 PM
To: McChristian, Jarrod
Subject: Seeking your assistance

Hello Jarrod,
Per our conversation, I am writing this email to ask your permission to conduct survey study in TK Sorting company for my Ph.D. dissertation. My study is about Marketing Strategy for Non-traditional Students in Higher Education. I do not ask for any personal information and the participation is absolutely confidential.
I am attaching my draft of survey questions here for you to review. Thank you so much and look forward to hear from you.
Jianping Landrum

APPENDIX E. SURVEY ON THE PURSUIT OF A UNIVERSITY DEGREE

Please answer the following questions. For questions that use a scale of 1 to 7, a 1 = least likely and a 7 = most likely. For other questions, select be best answer for you.

1. What is the highest degree you currently have?
   High school diploma/GED Associate's Bachelor's Master's Doctoral
2. Are you interested in pursuing a higher degree?
   Yes Maybe No
3. If the previous answer is yes, how long before do you plan to go back to school?
   Current in Less 1 year 1-2 years 2-3 years 3-4 years 5+ years
4. How satisfied are you with your current job?
   1 2 3 4 5 6 7

5. How likely are you to receive a promotion at your company upon earning a higher degree?
   1 2 3 4 5 6 7
6. I expect that the curricula/ programs will cover:

General knowledge that will apply to my future career	1	2	3	4	5	6	7
Content that will be related to my future work	1	2	3	4	5	6	7

7. I would consider pursuing a degree if the full tuition was: Full

paid for by a scholarship or sponsorship	1	2	3	4	5	6	7
Under $3,000 per semester	1	2	3	4	5	6	7
Between $3,000 -$5,000 per semester	1	2	3	4	5	6	7
Between $5,000 -$8,000 per semester	1	2	3	4	5	6	7
Between $8,000 -$10,000 per semester	1	2	3	4	5	6	7
Over $10,000 per semester	1	2	3	4	5	6	7

8. I would prefer to do the application and registration online as opposed to do a paper application and registration.
   1 2 3 4 5 6 7
9. I would like to attend a well-known university instead of a community college.
   1 2 3 4 5 6 7
10. I would consider going back to get a degree if I received more information regarding the university or its programs.
    1 2 3 4 5 6 7
11. I would like to participate in a university open house or seminar to learn more information.
    1 2 3 4 5 6 7
12. I prefer to obtain information about a university or school and its programs online.
    1 2 3 4 5 6 7
13. I would like to receive information about a university or school and their programs from an individual approach such as a phone call or an email.
    1 2 3 4 5 6 7
14. I am likely to hear information about universities or schools and their programs by:

Listening to the radio in the car while driving	1	2	3	4	5	6	7
Watching TV at home	1	2	3	4	5	6	7

15. I would like to attend a university or college that has:

More social activities (clubs and university activities)	1	2	3	4	5	6	7
Active nightlife activities	1	2	3	4	5	6	7
Housing available	1	2	3	4	5	6	7
Provides daycare services	1	2	3	4	5	6	7
Better facilities/buildings	1	2	3	4	5	6	7

16. I would be willing to attend a university:

Within 10 miles of my home or workplace	1	2	3	4	5	6	7
Nearby my work with the distance in 30 miles	1	2	3	4	5	6	7
Nearby my work with the distance in 60 miles	1	2	3	4	5	6	7
Within my state	1	2	3	4	5	6	7
Outside the state where I reside	1	2	3	4	5	6	7

17. I would be willing to pursue a degree that offers classes that are flexible with my work schedule, such as those offered:

On the weekend	1	2	3	4	5	6	7
In the evenings	1	2	3	4	5	6	7
Online	1	2	3	4	5	6	7

18. I would like to attend courses that are taught by a professor who has:

A practical background in the topic area (has real-world experience)	1	2	3	4	5	6	7
A strong theoretical or academic background	1	2	3	4	5	6	7

19. I would like to deal with staff members who know policies and procedures very well.

1 2 3 4 5 6 7

20. How likely do you feel your spouse or significant other would be supportive if you wanted to return to school?

1 2 3 4 5 6 7

21. How likely do you feel your company would be supportive if you wanted to return to school?

1 2 3 4 5 6 7

22. Rank the factors by order of important to you with 7 being the most important and 1 being the least important to you.

_____Curricula/Programs

_____Tuition Fee

_____Flexible schedule

_____Distance from campus

_____Academic reputation

_____Knowledge of faculty

_____Helpful staff

APPENDIX F. SURVEY DATA

7 Ps	Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
General Info	Response	Master	Master	BA	Master	BA	High School diploma	BA	BA	AA	High School diploma	High School diploma	High School diploma	AA	High School diploma	AA	AA	BA
	Interested in Pursuing higher degree	Maybe	No	No	Maybe	No	Maybe	Yes	No	No	Yes	No	Yes	Maybe	No	Maybe	Yes	Maybe
	How long go back	1-2 years			2-3 Years			1-2 Years			2-3 Years		1-2 Years				3-4 Years	
	Job satisfaction	Yes	Yes	Yes	No		Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes
	Promotion opportunity	3	3	4	5		4	1	2	1	6	4	1	4	4	2	4	4
Product	Apply to future career	3	7		6		5	7	7	3	6	5	5	6	6	5	7	6
	Related to work	4	6	5	5		5	5	6	3	5	5	5	3	6	5	7	4
Price	Scholarship	7	6	6	7		6	7	4	1	7	1	7	6	7	7	7	7
	Under $3000	6	1	3	5		5	7	4		1	1	5	5	5	6	7	4
	$3000-$5000	5	1	3	4		4	4	1		1	1	4	3	4	4	7	1
	$5000-$8000	1	1	2	1		3	4	1		1	1	3	1	3	1		1
	$8000-$10000	1	1	2	1		2	1	1		1	1	2	1	2	1		1
	Over $10000	1	1	1	1		1	1	1		1	1	1	1	1	1		1
Process	Registration online vs paper	7	6	6	7	7	7	7	6	3	7	7	7	3	7	6	7	7
Promotion	Well-known university vs community college	5	6	4	5	7	2	7	6	3	4	3	7	4	6	7	1	7
	received more information	5	5	3	4		4	7	5	2	4	1	4	5	5	6	7	5
	Open house or seminar	2	2	3	4	1	2	1	4	1	2	1	4	3	3	6	1	5
	Obtain information via online	7	4	6	6	1	5	7	6	2	7	7	6	4	6	6	7	6

	Obtain information via phone or emails	3	4	3	2	1	2	4	3	3	2	1	3	3	2	2	4	4
	listening to radio	1	3	5	1		5	1	5	3	1	1	2	6	5	1	7	4
	Watching TV	1	3	2	1	1	5	7	5	4	1	4	4	3	5	1	7	6
Physical Evidence	Social activities	1	2	6	1	1	1	4	1	1	1	7	4	2	4		1	4
	Active nightlife	1	2	5	5	1	1	4	1	1	1	7	3	2	4		1	2
	Housing availability	1	2	5	3	1	1	4	4	1	1	1	3	1	4		1	2
	Daycare services	1	2	3	1	1	1	4	1	1	1	1	4	1	3		1	1
	Better facilities/ buildings	5	3	5	7	1	3	7	5	1	1	6	6	5	6	6	1	2
Place	Within 10 miles of home or work	7	5	6	7	1	6	7	7	2	7	7	7	6	6	7	7	6
	within 30 miles	7	3	4	6	1	5	7	6	2	7	3	5	4	3	1	1	4
	within 60 miles	4	2	3	5	1	4	1	3	1	4	2	3	2	3	1	1	2
	within my state	7	1	2	1	1	3	4	1	1	1	1	3	1	3	1	1	1
	outside my state	1	1	2	1	1	1	4	1	1	1	1	1	1	2	1	1	1
	Flexible with work on the weekend	7	6	6	7	1	6	6	6	2	7	7	7	5	5	6	1	5
	Flexible with evening work	6	6	6	7	1	6	6	6	2	7	7	7	6	5	6	2	6
	Flexible with my work online	7	6	5	7	1	6	7	6	2	7	7	7	6	5	6	7	7
People	Professor with real-world experience	7	7	5	7	7	7	7	7	2	7	7	7	6	6	6	7	6
	theoretical/academic Professor	7	4	5	4	7	6	4	5	2	7	4	7	4	6	4	7	5
	Staff know policies and procedures well	7	7	6	7	4	7	7	6	2	7	7	7	6	6	6	7	6
	Supportive spouse or significant other	7	1	6	7	7	6	6	4	2	7	7	7	5	6	6	7	6
	Employer Support	7	5	6	7	7	7	5	6	7	7	7	7	5	6	5	7	6
Rank 7	Curricula/Programs	2	4	4	7	1	1	2	1	3	7	3	2	7	4	Yes	3	1
	Tuition Fee	3	2	1	7	2	4	6	3	4	1	4	1	4	1	Yes	4	6
	Flexible schedule	1	3	2	6	3	7	7	4	5	6	5	5	6	2	Yes	1	5
	Distance form campus	4	7	3	1	4	6	3	5	7	2	2	6	5	3	Yes	2	4

	Academic reputation	5	1	5	6	7	5	5	6	6	5	6	3	3	5	Yes	5	3
	Knowledge of faculty	6	5	6	2	6	2	4	2	2	3	1	4	2	7	Yes	6	2
	Helpful staff	7	6	7	5	5	3	1	7	1	4	7	7	1	6	Yes	7	1

Survey Data Page 2

						1				2				3
			General Info			**Product**			**Price**			**Process**		
Participants	Degree Level	Interested in Pursuing higher degree	How long go back	Job satisfaction	Promotion opportunity	Apply to future career	Related to work	Scholarship	Under $3000	$3000-$5000	$5000-$8000	$8000-$10000	Over $10000	Registration online vs paper
8	GED	No		5	1			1	1	1	1	1	1	1
21	Bachelor	No		6	4	5	5	7						7
25	GED	No		5	2									4
37	GED	No		6	5	5	5	7						6
45	Master	Maybe		4	1	6	6	7	6	5	4	3	1	7
47	GED	No		5	4	3	3	1						2
48	Associate	Yes	2-3 years	7	4	7	7	7	7	4	4	1	1	7
50	GED	Maybe	3-4 years	5	5	5	5		7	3	3	2	2	7
51	GED	Maybe		6	4	6	6	4	4	3	3	1	1	7
56	GED	Yes	1-2 years	4	4	4	3	7	6	5	5	3	1	1
61	GED	No		4	3	3	3	7	4	1	1	1	1	1
65	GED	Yes	5+ Years	4	3	6	7	7	6	4	3	1	1	7
69	GED	Maybe	1-2 years	1	1	7	6	7	5	1	1	1	1	3
72	Master	No		6	3	2	2	6	1	1	1	1	1	1
73	Associate	No		3	3			2	1	1	1	1	1	1
75	GED	Yes	Current in	5	5	6	6	7						5
77	GED	No		1	1	4	4							1
78	Master	No		1	1	1	1	1						1
80	GED	Yes	Less 1 year	7	7	7	7		7					1

81	GED	Yes	1-2 Years	4	7	7	7	7	7	1	1	1	1	7
82	GED	No	5+ Years	7	7	7	7	7	6	7	6	7	6	7
84	GED	Maybe	3-4 years	7	7	1	1	1	1	1	1	1	1	7
85	GED	No		1	1	1	1	1	1	1	1	1	1	1
94	Bachelor	Maybe		6	3	5	5	7	4	4	4	4	4	7
127	Bachelor	Maybe		5	2	6	5	6	6	5	3	2	1	7
135	Bachelor	No		6	5	5	7	3	3	1	1	1	1	7
136	Bachelor	No		4	1	5	5	5	5	4	1	1	1	3
145	Bachelor	Maybe	3-4 years	5	2	5	5	5	1	1	1	1	1	7
1	Master	Yes	2-3 years	6	4	3	6		6					6
2	Bachelor	Yes	Current in	5	5	6	7	7	7	7	6	4	1	7
3	Bachelor	Yes	Less 1 year	6	4	5	7	7	7	6	5	3	2	7
4	Associate	Maybe	Current in	4	2	7	7	6	2	2	2	2	1	6
5	GED	No			4	5	5	5						5
6	GED	Some College			1	4	4	7						1
7	GED	Yes	Current in	5	2	7	7	7	3	3	3	3	1	7
9	Master	No		5	3	7	7	7	1	1	5	5	5	7
10	Master	No		6										
11	Master	No		3	1			3	2	1	1	1	1	1
12	Master	No		4	1	6	6	7						7
13	Associate	Yes	Current in	5	7	5	5	7	7	6	5	3	1	7
14	Associate	Yes	1-2 years	6	6	7	7	7	4	4	2	2	1	7

15	Associate	Yes	Less 1 year	6		5	6	7						7
16	Bachelor	Maybe		2	2	3	5	5	5	3	2	1	1	7
17	Master	Maybe	3-4 years	6	4	4	6	7	5	4	3	2	1	7
18	Bachelor	Yes	1-2 years	6	5	6	6	7	7	6	6	5	4	7
19	Bachelor	yes	Current in	6	3	5	5	7	6	5	4	3	2	4
20	Bachelor	Maybe		5	4	4	5	7	4	1	1	1	1	7
22	GED	Yes	1-2 years	6	2	7	7	7	7	5	3	1	1	7
23	GED	No		4	4	1	1	1	1	1	1	1	1	1
24	Associate	No		5	3	7	7	4	2	2	2	2	1	7
26	Bachelor	No		6	1	6	3	7	6					4
27	Master	No		6	5	7	7	7	5	4	3	2	1	7
28	Bachelor	Maybe	2-3 years	5	5	7	7	7	6	5	4	2	1	6
29	Bachelor	No		6	2	7	6							7
30	Associate	No		7	1	5	4	1	1	1	1	1	1	6
31	Bachelor	Yes			5	6	6	7	4	3	1	1	1	7
32	Bachelor	No		5	1	7	7	7	7	7	7	7	7	7
33	GED	No		6	2	5	5	7	1	1	1	1	1	7
34	Bachelor	No		7	4	6	6	5	2	2	1	1	1	7
35	Bachelor	Maybe	2-3 years	6	4	7	5	7	7	7	5	2	1	6
36	Bachelor	Maybe	2-3 years	2	1	7	7	7	7	4	1	1	1	7
38	Bachelor	Yes	1-2 Years	6	3	7	7	7	5	3	1	1	1	6

39	Associate	No		3	2	1	1	5	3	1	1	1	1	5
40	Bachelor	Maybe	1-2 years	7	2	6	6	7	6	5	2	1	1	6
41	Bachelor	No		4	1	6	6	7	7	6	4	2	1	6
42	Bachelor	Maybe		6	2	5	6	4	3	3	2	1	1	7
43	GED	Maybe		4	4	4	4	5	5	5	5	5	5	4
44	Bachelor	No		5	4	7	7	7	7	7	5	3	1	7
46	Associate	Yes	1-2 years	5	3	6	6	6	6	4	2	1	1	7
49	GED	Yes	Less 1 year	6	6	7	7	7	6	4	4	1	1	4
52	GED	Maybe	1-2 years	7	5	4	4	7	5	3	2	1	1	7
53	GED	Maybe		5	7	7	7	7	4	3	1	1	1	7
54	GED	Yes	1-2 years	6	6	7	7	7	7	2	2	1	1	7
55	GED	Yes	5+ Years	7	7	7	7	7						7
57	GED	Maybe	5+ Years	5	1	1	1		5					2
58	GED	Maybe	1-2 Years	5	7	7	7	1	1	1	1	1	1	1
59	GED	Yes	1-2 years	6	7	7	4	7	7	1	1	1	1	7
60	GED	Maybe	Less 1 year	4	4	4	4	4	3	2	1	1	1	4
62	Bachelor	No		4	2	3	3	1	1	1	1	3	5	7
63	Associate	Yes	1-2 years	6	6	6	7	7						7
64	GED	Yes	1-2 years	3	3	5	5	7	7	5	4	3	2	4
66	Bachelor	Maybe	1-2 years	4	5	4	5	6	5	3	2	2	1	2

67	GED	Maybe	2-3 years	5	3			4	2	2	2	2	2	4
68	GED	Maybe	2-3 years	4	6	5	5	5						5
70		Yes	1-2 Years	3		6	6	7					7	5
71	Associate	Maybe		4	4	4	4	7						7
74	GED	Maybe		7	7	7	7	7						7
76	Bachelor	Maybe	2-3 years	4	4	7	6	7	6	3	2	1	1	6
79	Associate	Maybe		7	6	7	7	7	6	2	1	1	1	4
83	GED	Yes	Less 1 year	7	7	7	7	1	1	1	1	1	1	7
86	Bachelor	No		7	7	6	6	7	7	3	2	1	1	6
87	GED	Maybe		6	5	6	6	7	5	4	3	2	1	6
88	Bachelor	Yes	1-2 Years	6	4	7	7	7	1	1	5	7	7	4
89	GED	No		6	7	6	6	7	6	5	5	3	2	7
90	Master	Maybe	1-2 years	2	2	4	5	7	6	4	4	1	1	1
91	Bachelor	Maybe		4	2	4	4	6	5	4	3	3	3	7
92	Master	Maybe		4	1	5	5	6	5	5	4	3	3	6
93	Bachelor	No		5	2	6	6	1	1	1	1	1	1	7
95	Bachelor	No		5	4	5	6	6	4	4	4	4	4	6
96	GED	Yes	1-2 years	7	4	7	7	7	6	3	1	1	1	7
97	Bachelor	Yes	2-3 years	6	4	7	7	7	7	6	3	2	1	5
98	Bachelor	Yes	1-2 years	5	4	7	7	7	7	7	6	4	4	5
99	Bachelor	No		6	5	5	5	6	5	4	1	1	1	7

100	Associate	Yes	Less 1 year	4	6	6	6	7	7	4	4	1	1	6
101	Bachelor	Yes	2-3 years	2	2	6	6	7	6	3	1	1	1	7
102	Bachelor	Maybe		4	1	4	4	7	5	1	1	1	1	7
103	Bachelor	Maybe	1-2 years	5	2	5	5	7	5	2	1	1	1	7
104	Bachelor	No		5	3	6	6	7	4	2	1	1	1	7
105	Master	No		3	1	5	5	1	1	1	1	1	1	7
106	Master	No		5	6	6	6	4	3	2	2	2	2	7
107	Bachelor	Maybe		5	4	4	4	6	4	2	1	1	1	
108	Bachelor	No		3	1	1	1	7	1	1	1	1	1	7
109	Bachelor	Maybe		3	1	6	3	7	5	3	1	1	1	7
110	Bachelor	Maybe	2-3 years	5	3	6	6	7	6	5	5	2	2	7
111	Bachelor	Yes	3-4 years	4	3	4	4	7	6	6	4	3	2	7
112	Bachelor	Maybe		5	1	4	4	7	3	2	1	1	1	7
113	Bachelor	Maybe		6	4	6	6	6	4	3	1	1	1	6
114	Doctoral	No		4	1	1	1	1						1
115	Associate	Yes	Current in	7	5	5	5	7	3	3	2	1	1	6
116	GED	No		5	4	6	6	7	5	3	1	1	1	7
117	GED	No		3	1	1	1	7	1	1	1	1	1	7
118	GED	Maybe		6	4	6	6	7	7	5	1	1	1	4
119	Associate	No		5	3	3	3	6	4	2	2	2	1	5
120	GED	Yes	3-4 years	5	3	6	6	6	3	1	1	1	1	4
121	Bachelor	Yes	1-2 years	7	3	7	5	7	1	1	1	1	1	7

122	Associate	Maybe	5+ Years	6	5	6	5	7	6	5	1	1	1	6
123	Master	Maybe	5+ Years	6	4	6	6	7	5	4	1	1	1	6
124	Bachelor	Yes	2-3 years	6	2	7	7	7	6	4	1	1	1	7
125	Master	No		6	2	5	4	7	6	5	4	4	4	7
126	Bachelor	Maybe	3-4 Years	7	4	6	4	6	4	6	4	3	2	6
128	Bachelor	Maybe		6	4	6	6	6	7	5	2	2	1	7
129	Bachelor	No		7	4	6	6	7	6	5	4	3	2	6
130	GED	No		6	2	5	6	6	2	2	2	2	1	6
131	Bachelor	No		5	1	5	5	1	1	1	1	1	1	7
132	Bachelor	Yes	2-3 years	5	6	6	5	7	7	6	6	4	2	6
133	Bachelor	Yes	Less 1 year	6	3	5	7	7	7	7	1	1	1	7
134	Bachelor	Yes	1-2 years	4	4	6	6	7	5	4	3	1	1	7
137	Bachelor	No		6										7
138	Bachelor	No		6	4		6	4	4	4	1	1	1	6
139	Bachelor	Maybe		4	2	6	6	7	3	2	2	1	1	7
140	Master	Maybe	2-3 years	6	1	7	7	7						4
141	Bachelor	Yes	Less 1 year	5	1	7	7	7	4	5	6	7	7	7
142	Bachelor	No		6	1	7	7	5	1	1	1	1	1	4
143	Bachelor	No		4	1	4	4	7						7
144	Bachelor	Maybe	2-3 years	5	4	6	6	6	4	3	2	1	1	6

146	Associate	Yes	1-2 years	4	5	4	5	7	6	6	3	3	1	7
147	GED	Maybe	2-3 years	3	4	6	5	7	7	4	4	1	1	5
148	Associate	Yes	Less 1 year	3	2	7	4	7	4	3	2	1	1	4

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4						
Promotion						
Well-known university vs community college	received more information	Open house or seminar	Obtain information via online	Obtain information via phone calls or emails	listening to radio	Watching TV
1	1	1	1	1	1	1
5	4	4	4	6		5
4	1	1	1	1	1	1
4	4	2	5	4	3	6
6	4	2	4	4	1	1
2	2	2	2	2	2	2
7	7	7	7	7	1	1
4	3	1	1	1		4
3	4	4	4	3	3	5
5	3	1	1	2	5	2
1	1	1	1	1	1	1
4	5	3	5	4	4	6
2	3	1	4	1	4	4
7	1	1	1	1	1	1
1	1	1	1	1	1	1
4	6	6	5	6		5
1	1	1	1	1	1	1
1	1					
1	7	5	1	7	1	1
7	7	7	7	7	6	7
7	7	7	7	7	6	
1	1	1	1	1	1	1
1	1	1	1	1	1	1
7	7	7	7	4	4	4
6	5	4	4	2	3	1
7	3	3	7	2	1	5
4	2	2	6	2	2	1
5	3	1	7	1	1	1
6	6	6	6	3	3	3
5	7	4	7	6	5	3
5	5	6	7	4	1	1
4	4	5	5	3	1	4
5	4	4	4	1	5	5

1	3	1	1	1	1	1
6	6	7	7	2	6	1
7	5	4	5	3	1	1
5	5	2	2	2	6	
2	1	1	5	1	6	4
7	4	2	7	6	7	7
4	5	5	6	5	2	2
5	5	5	7	7	1	1
4	5	4	6	3		5
7	2	2	5	1	1	1
7	6	4	6	1	1	1
6	6	6	5	5	1	1
4	5	2	6	2	2	1
5	4	3	6	3	5	4
6	5	5	5	2	5	1
1	1	1	1	1	4	4
4	2	2	1	1	1	1
4	2	2	2	1	1	
7	5	4	4	4	2	2
5	6	5	5	5	4	3
7	3	2	7	2	1	1
2	2	2	1	6	1	1
6	5	4	6	6	1	1
7	1	1	7	1	1	7
4	3	2	2	2	2	6
6	6	4	5	2	4	5
7	7	4	5	2	4	6
3	7	7	6	1	6	1
6	3	3	7	2	3	6
5	2	1	1	1	1	5
6	6	6	7	2	6	6
6	1	1	5	1	6	6
5	4	3	7	5	5	2
2	3	2	5	2		4
7	7	7	1	7	1	7
7	6	1	6	2	5	6
5	5	7	5	5	6	3
7	5	3	6	1	1	1
1	7	7	4	4	5	
3	7	6	7	1	6	4
1	2	1	7	7	7	1
4	3	4	2	2	3	2

1	1	1	1	1	2	3
1	3	1	7	2	1	3
4	4	2	4	4	2	1
7	2	1	5	1	1	4
7	7	7	7	7	1	5
2	4	2	3	4	1	3
5	5	5	5	2	5	5
1	2	1		2	5	5
4	5	4	4	4		4
	6	6	4	5	3	3
7	7	7	4	2	1	1
4	1	2	7	5	7	
4	5	6	6	3	5	2
3	6	6	3	5	2	4
1	7	7	4	7	7	1
6	1	1	1		6	6
4	4	3	2	3	6	3
7	7	7	4	4	7	2
4	4	3	7	2	6	7
1	5	5	4	5	4	1
4	4	5	4	1	4	4
6	4	4	4	1	2	2
7	3	3	5	5	5	5
5	4	3	6	4	5	4
7	5	2	5	1	5	4
4	6	7	5	6	6	4
6	4	3	6	6	7	5
7	2	2		3	5	5
7	6	7	6	6	7	6
4	6	3	7	6	1	1
7	4	3	6	3	1	1
5	4	1	6	2	2	2
6	5	5	7	2	1	1
7	1	7	7	1	1	1
7	6	5	1	2	3	6
4	4	2	5	3	5	3
7	1	1	4	4	1	1
4	4	2	7	2	5	5
7	7	5	6	6	6	5
6	5	4	5	3	2	2
6	4	4	4	6	4	4
6	4	1	3	1	3	3

7	1	1	1	1	7	7
6	4	1	6	1	1	4
5	1	1	6	2	4	3
4	1	1	1	1	1	1
4	5	1	7	1	7	7
2	2	2	2	2	5	3
4	4	3	4	1	1	1
4	2	3	7	1	2	7
5	5	4	6	1	5	2
6	6	4	5	4	1	1
7	7	4	7	2	2	1
7	5	3	7	2	5	4
7	7	7	7	7	5	7
7	7	6	7	7	4	6
7	5	3	6	1	3	4
5	2	1	5	4	2	5
7	2	1	7	1	3	5
7	6	5	6	6	3	4
7	7	5	6	3	4	5
7	4	3	4	6	1	1
4	1	1	6	4	6	2
6	3	3	6	4	6	6
7	7	6	7	2	5	2
7	5	4	5	3	3	2
7	4	1	7	1	4	4
7	5	3	3	3	3	3
7	7	4	1	4	1	1
5	4	3	5	4	5	5
3	5	3	5	2	1	3
6	5	6	6	5	3	7
5	5	4	6	6	1	1

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	5							6				
Physical Evidence						**Place**						
More social activities (clubs and University activities)	Active nightlife activities	Housing available	Provides daycare services	Better facilities/ buildings	Within 10 miles of my home or workplace	nearby my work with the distance in 30 miles	nearby my work with the distance in 60 miles	within my state	outside the state where I reside	Flexible with my work on the weekend	Flexible with my work in the evenings	Flexible with my work online
1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	5	7	1	1	1	1	5	3	7
1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	6	2	2	2	1	5	5	5
3	1	1	1	4	7	7	5	4	1	3	6	6
4	4	5	4	4	3	3	3	3	3	4	4	4
1	1	1	1	5	7	7	1	1	1	7	1	7
3	3	3	3	3	7	3	3	3	3	2	2	7
3	3	3	1	3	4	4	3	4	2	5	2	6
2	2	2	1	4	7	4	2	1	1	6	6	6
1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	7	4	6	6	4	1	1	1	4	7
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				6	6						6	7
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		7			7							7
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5	4	4	1	6	7	6	4	7	1	6	6	6
6	5	6	2	5	6	2	2	2	2	6	6	3
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3	5	3	2	5	5	5	4	3	2	1	7	1
3	4	1	1	4	7	5	3	1	1	7	7	7

Data Page 5

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People					Rank 7						
Professor with real-world experience	Professor with a strong theoretical or academic background	Staff members who know policies and procedures very well	Your spouse or significant would be supportive	Your company would be supportive	Curricula/Programs	Tuition Fee	Flexible schedule	Distance form campus	Academic reputation	Knowledge of faculty	Helpful staff
1	1	5	1	4	Plan to be retired						
6	6	6	7	4	6	7	7	7	6	7	6
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7	7	7	7	7	7	7	7	6	7	7	5
4	4	7	1	5							
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7	1	3	7	3							
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6	7	4	3	7	7	7	7	7	7	7	7
			6	6	7	7	7	7	7	7	7

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6	6	5	5	3	5	6	4	1	7	3	2
6	5	6	7	7	5	4	3	1	6	2	7
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7	6	6	6	4	7	4	3	2	5	6	1
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3	4	4	5	5	5	7	3	4	6	2	1
7	5	7	7	7	3	6	7	4	5	2	1

APPENDIX G. DATA PERCENTAGE TABLES

Q7 Price

Price	1	2	3	4	5	6	7
Scholarship	10.1%	0.7%	1.4%	5.0%	6.5%	12.2%	64.0%
Under $3000	16.8%	4.8%	8.0%	13.6%	16.0%	20.0%	20.8%
$3000-$5000	25.6%	12.4%	16.5%	17.4%	14.9%	7.4%	5.8%
$5000-$8000	43.8%	17.4%	10.7%	14.0%	8.3%	5.0%	0.8%
$8000-$10000	60.3%	15.7%	13.2%	5.0%	2.5%	0.0%	3.3%
Over $10000	77.9%	9.8%	1.6%	4.1%	2.5%	0.8%	3.3%

Q8-Q14 Promotion

Promotion	1	2	3	4	5	6	7
Well-known uniervsity instead of a community college	11.6%	4.8%	3.4%	20.4%	14.3%	15.0%	30.6%
Received more information	14.9%	10.1%	9.5%	18.9%	20.3%	11.5%	14.9%
Open house or seminar	25.2%	15.0%	15.0%	15.6%	9.5%	8.2%	11.6%
Obtain information via online	15.9%	4.8%	2.8%	14.5%	18.6%	19.3%	24.1%
Obtain information via phone calls or emails	28.8%	22.6%	10.3%	13.0%	7.5%	10.3%	7.5%
Listening to radio	34.0%	10.6%	10.6%	9.9%	16.3%	12.1%	6.4%
Watching TV	33.1%	10.6%	10.6%	15.5%	14.1%	9.2%	7.0%

Q15 Physical Evidence

Physical Evidence	1	2	3	4	5	6	7
More social activities (clubs and University activities)	35.7%	17.9%	14.3%	11.4%	7.1%	8.6%	5.0%
Active nightlife activities	43.2%	17.3%	11.5%	12.9%	7.2%	5.8%	2.2%
Housing available	49.3%	13.6%	11.4%	9.3%	5.7%	5.7%	5.0%
Provides daycare services	52.2%	11.6%	5.1%	13.0%	5.1%	5.1%	8.0%
Better facilities/ buildings	19.1%	3.5%	5.7%	17.7%	19.1%	22.7%	12.1%

Q16-17 Place

Place	1	2	3	4	5	6	7
Within 10 miles of my home or workplace	8.3%	1.4%	5.6%	4.2%	9.7%	19.4%	51.4%
Nearby my work with the distance in 30 miles	17.5%	6.6%	7.3%	10.9%	24.1%	15.3%	18.2%
Nearby my work with the distance in 60 miles	41.9%	15.4%	15.4%	11.8%	8.1%	4.4%	2.9%
Within my state	46.7%	15.3%	10.9%	8.0%	5.1%	5.1%	8.8%
Outside the state where I reside	75.2%	13.1%	4.4%	3.6%	0.7%	1.5%	1.5%
Flexible with my work on the weekend	16.3%	5.7%	5.0%	9.2%	14.2%	19.1%	30.5%
Flexible with my work in the evenings	15.1%	2.9%	5.8%	7.9%	20.1%	21.6%	26.6%
Flexible with my work online	12.0%		5.6%	3.5%	12.0%	23.9%	43.0%

Q18-Q21 People

People	1	2	3	4	5	6	7
Professor with real-world experience	5.8%	0.7%	1.4%	6.5%	11.5%	22.3%	51.8%
Professor with a strong theoretical or academic background	13.2%	5.1%	11.0%	17.6%	22.1%	17.6%	13.2%
Staff members who know policies and procedures very well	2.1%		3.5%	11.3%	14.2%	35.5%	33.3%
Your spouse or significant would be supportive	6.9%	4.1%	4.1%	7.6%	9.7%	20.7%	46.2%
Your company would be supportive	7.1%	5.0%	7.8%	17.0%	17.0%	18.4%	27.7%

Q22 Ranking

Ranking	1	2	3	4	5	6	7
Curricula/Programs (Product)	6.9%	13.2%	7.6%	9.0%	18.8%	11.8%	31.9%
Tuition Fee (Price)	16.2%	7.7%	9.9%	10.6%	8.5%	18.3%	28.9%
Flexible schedule (Process)	4.2%	6.3%	12.6%	11.9%	18.2%	21.0%	25.9%
Distance form campus (Place)	16.8%	11.9%	16.1%	21.0%	12.6%	11.9%	9.8%
Academic reputation (Promotion)	11.2%	11.9%	15.4%	11.2%	23.1%	17.5%	9.8%
Knowledge of faculty (People)	16.1%	16.1%	13.3%	16.8%	10.5%	14.7%	12.6%
Helpful staff (Phycical Evidence)	28.0%	18.2%	11.9%	9.1%	7.0%	5.6%	20.3%

VITA

JIANPING LANDRUM

EDUCATION

Purdue University, Polytechnic Institute — Expected: August 2019
Ph.D., Strategic Marketing in Higher Education 3.8/4.0 GPA

Purdue University, Krannert School of Management — June 2015
Applied Management Principles (AMP), mini-MBA program

Purdue University, College of Technology — May 2012
M.S., Technology Leadership and Innovation, 3.8/4.0 GPA

Zhongnan University Economics and Law, Wuhan China — May 2006
B.A., Foreign Trade, 3.2/4.0 GPA

PROFESSIONAL EXPERIENCE

Purdue University — January 2016 -Present
Graduate Research Assistant to the Dean of the Polytechnic Institute

- Prepare materials for workshops and meetings
- Collaborate with Workforce Development Engagement Group for funding, visibility and employer involvement
- Conduct research, gathered and analyzed data, and produced reports and papers
- Coordinate with Industry for writing workforce development white paper

Subaru of Indiana Automotive — March 2016- Present
SQA Engineer

- Strategically lead supplier performance improvement projects in an effort to increase the supplier capability of consistently meeting SIA requirements. Projects include: process analysis, value stream mapping, process capability and throughput analysis, SPC, 6-Sigma, 5S and Kaizen events
- Work with Purchasing to ensure supplier performance is regularly reported and that appropriate and timely corrective actions are implemented
- Maintain and update critical supplier audit system and schedule
- Conduct supplier audits to drive process standardization, waste elimination, and continuous improvement 4. Monitor, communicate and improve key supply chain KPI's, including Supplier OTD (Past due), PPM and waste
- Establish specific short / long term supplier quality goals
- Develop long-term supplier relationships and generate and implement cost reduction ideas

Oerlikon Fairfield Manufacturing Company April 2012- November 2015
Marketing Business Analyst & China Liaison

- Conducted surveys, gathered and analyzed market data enabling visualization of indicators of fundamental performance to identify market segments
- Created monthly market research reports on specific products and markets
- Utilized quantitative methods for Census data vs our internal data to generate business cycle forecasting and to estimate consumer demand and position product to develop marketing strategies for diverse business environments
- Collaborated with IT department peers to build a global marketing dashboard with monthly sales reports on a Web Portal, generating presentation of our business review for product groups, marketing segments, shipments etc.
- Worked with global product development and branding groups to build current and potential customers' satisfaction questionnaire for worldwide customer loyalty communication purpose
- Analyzed market opportunities and campaigns, customers, pricing and preparing business critical reports to provide financial modeling to drive long term strategy
- Designed graphics for print and on-line advertisements, flyers, posters, and product catalogs
- Managed marketing and social media development, including updating company website, creating job descriptions, coordinating promotional events, and post to Twitter, Facebook, LinkedIn, etc.

Oerlikon Fairfield Manufacturing Company August 2011-April 2012
Organizational Business Development Specialist

- Established a five-year business plan, including client acquisition strategy and market research analysis
- Worked in conjunction with a cross- functional team to research, analyze, and develop strategies and made recommended adjustments to forecast and inventory targets based on changes in demand and market trends
- Organized and coordinated global training programs for supervisors involving technical transfer to a Chinese facility

Oerlikon Fairfield Manufacturing Company May 2011-August 2011
Financial Analyst (Summer Internship)

- Reviewed financial statement and analyzed sales reports, costs, and expenses for key customers and business units to generate a weekly report summary as well as provided routine ad-hoc, analysis, news and presentation updates
- Attended weekly meetings with department heads and staff to evaluate key indicators, including market conditions, sales projections, and financial forecasts

Purdue University, College of Technology August 2010–August 2011
Graduate Research Assistant

- Conducted research, gathered and analyzed data, and produced reports and papers
- Teamed with professors and other graduates as supporting consultant for SAP Logistics Execution (LE) and Materials Management (MM) working with 5+ manufacturing

operations to change requests, develop business requirements, testing of the system, training, and evaluating and resolving issues related to the LE and MM applications

- Led forecast and inventory planning meetings with Marketing Managers, reviewing recommended sales forecasts and inventory goals (emphasis on brand transitions, new product introduction, and promotions)
- Supported customers by establishing a more efficient supplier portal for global sourcing to better manage the
- Collaborated in the sharing of information through a single platform

Target, Lafayette, Indiana December 2007 – March 2009
Sales Associate

- Managed training of all new employees while directing internal and external clients
- Utilized interpersonal and communication skills effectively to serve customers by providing detailed knowledge of products to increase revenue

Zhongtian International Hotel/Conference Center, Wuhan, China July 2006 – April 2007
Sales Director

- Developed and implemented a 4-week training program to equip 10 sales representatives with skills needed to conduct sales proposals, agreements, sales reports, presentations, and contract negotiations
- Generated over $200k in profits during the next two months following training techniques

PUBLICATIONS

Song, Jianping. (December 2012). Reducing High Turnover Rates of New Hires at JS Enterprises. Franklin Publishing Company, Vol 4.
Song, Jianping. (February 2006). Private Enterprise, Have You Been Merged? Zhong Guo Shui Yun. Vol. 2.
Song, Jianping. (May 2006). How to Conduct the Outsourcing of Human Resource Management for the Small-Medium Sized Enterprises. Modern Economic Research. Vol. 3.

COMMUNITY AFFILIATIONS

Krannert Graduate Marketing Association (KGMA) - Purdue University Dec. 2015-Present
Member of American Gear Manufactures Association May 2011-Present

Member of CIPPAT, Confucius Institute, Purdue Performing Art Troupe Fall 2010