ORGANIZATIONAL FACTORS THAT AFFECT ENVIRONMENTALLY

PREFERRED PURCHASING: A QUALITATIVE STUDY OF FOUR

UNIVERSITIES

by

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Abstract

With an increase in worldwide environmental awareness, organizations are influenced by internal and external stakeholders to incorporate the ecosystem as a prominent component of their mission. It is unknown how universities are structured for Environmentally Preferred Purchasing (EPP). Four universities located in northeastern United States participated in the qualitative multiple-case study. Four individuals from each case were interviewed representing key stakeholder groups of Purchasing and Sustainability Departments, leadership, staff, faculty, and students. Literature pointed to four areas of influence: organization and department design, leadership, buyer behavior, and environmental activities. The instrument used to gather data was the interview using open-ended questions focused on four constructs. From the same opening question, discussions led into participant's area of expertise along with personal outlook. Data relationships for all cases became evident during the cross-case analysis. Ten relationships labeled were determined at the highest level of analysis. Many findings were consistent between the cases including purchasing department objectives and organizational interaction, leadership style, communication methods, student participation, and organizational overall commitment. Inconsistent findings among the cases included environmental programs, budgets, and academic investment. Overall findings were used to develop a model to achieve similar results for other internal functions coupled with external goals. Use of the model opens up a diverse range of research, such as EPP at other universities, EPP in other organizational types, and an internal focus influenced by an external goal.

Dedication

This research study is dedicated to my wife Lorena, who became one of God's Angels on May 10, 1991 and our two sons, John III and Mark who have both stayed with me throughout this very long and isolated journey. They have grown up to be honest, trusting, and reliable young men, and I know their mother in Heaven is very proud of both of them.

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I would also like to acknowledge Dr. John C. Hannon from Capella University and Dr. Stephen W. Hartman from the New York Institute of Technology for agreeing to serve as committee members. Their open, honest and constructive comments assisted in a much better paper. I thank them for staying with me for this period.

Appreciation goes out to the 16 participants who gladly and eagerly accepted to be contributors to this study. All interviews and interviewees were exceptional; each is contributing from various perspectives. I am grateful for their openness and willingness to extend their experience, knowledge, and outlook on college EPP activities. Each made the interview process straightforward and uncomplicated.

I want to acknowledge my three sisters (Patricia, Jacqueline, and Josephine) and their families for their dependable love and support from childhood. A special mention goes to three dear friends, Debbie, Diane, and Kate who regularly contacted me about my

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CHAPTER 1. INTRODUCTION

Introduction to the Problem

Purchasing departments have a mission to obtain necessary goods and services that allow their organizations to achieve its goals effectively and efficiently. Contributions from Purchasing efforts are driven by both strategic and operational components influenced by the dynamics of internal and external environments. When obtaining goods and services, Purchasing typically negotiates to achieve the best combination of price, quality, and service that meets stated specifications or desires of end-users. This process of multifaceted activities is also expected to attain desired results using minimal resources.

Background of the Study

Environmentally Preferable Purchasing (EPP), also referred to as *green purchasing*, is the selection of substitute goods and services that reduce the negative impact on health or the environment when compared to other goods and services. The *green movement* has strong support from federal, state, and local governments, various community groups, along with well-organized action committees nationally and internationally. Such demands from different facets of society are influencing organizations to dedicate more resources to environmental management (Buysse & Verbeke, 2002; Harris & Crane, 2002). As demand expands to all aspects of organizational supply chains, so does the need for new knowledge to support the objective. *Green* procuring remains in its infancy as society struggles to define agreeable characteristics and standards. The State of Massachusetts identified environmentally

preferable products and services as ones that have a less harmful effect on health and environment when evaluated by others that satisfy similar wants and needs.

Criteria include but not limited to recycled content, minimum waste, conservation, and fewer toxins (Commonwealth of Massachusetts Executive Office for Administration and Finance, n.d.). Minnesota added its criteria, duplicating Massachusetts' recycled, waste, conservation, and toxin specifications, and added plant-based materials to its list (Admin Minnesota, Materials Management Division, n.d.). New York State's scope is wider than Massachusetts' and Minnesota's focus. Criterion agrees with recycled, waste, and conservation (natural resources) and adds product life. New York State also takes into consideration all manufacturing and activities to get products and services to the customer. Additional concerns include cost to obtain raw materials, all aspects of manufacturing, handling, transportation, storage, distribution, use, maintenance, and disposal into purchasing decisions (New York State Procurement Services, n.d.).

To assist standardizing federal practice, the Office of Management and Budget (OMB) under the language of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (2010) provided guidelines for a voluntary set of standards for all federal agencies. Even though NTTAA was signed in 1996, current EPA sites do not state any change in federal practice (U.S. Environmental Protection Agency, 2010).

In an effort to help standardize Federal purchasing, in 2002 the U.S. Environmental Protection Agency awarded American National Standards Institute (ANSI) a grant and provided a goal to increase topic knowledge and coordinate acceptable standards from key stakeholders within U.S. organizations. In addition to

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ANSI, the U.S. Environmental Protection Agency also engaged NSF International and the Institute of Electrical and Electronic Engineers (IEEE) to promote and establish voluntary *green* standards (U.S. Environmental Protection Agency, 2010). NSF International's (2004) purpose is to certify food, water, and goods for health and public safety concerns. IEEE serves as the world's largest association for advancing technology to better humanity (IEEE, n.d.). The U.S. Environmental Protection Agency sponsored *green* activities led to two general categories: (a) standards for collecting, testing and analyzing product data and (b) definition for a green product (U.S. Environmental Protection Agency, 2010). To assist public and private organizations in EPP, the U.S. Environmental Protection Agency developed a database of environmental information pertaining to commonly purchased products and services (Database of Environmental Information for Products and Services, 2015).

Literature research has not demonstrated strong nor consistent actions by society or government to conclusively differentiate *green* from non-*green* products or services. Noted research to date provided only a guide in which to assist in making purchasing decisions. With products and services continually entering, maturing, and existing consumer markets, university buyers, and organizational leadership need to treat *green* commodities like any other commodity in its infancy.

Once several *green* criteria are identified, university EPP activities must be measured to determine program effectiveness. Because there are no set *green* standards, measurements can be difficult, timely, and costly, with results being controversial and political. What area will be benchmarked? What data should be compared? Who sets benchmarks? Will benchmarks be a moving target with time? Martínez-Lorente and

Clavel (2008) stated purchasing and organizational performance must be measured by three criteria: (a) benchmarking activities accurately reveal positive and negative purchasing performance (purchasing as a self-unit), (b) organizational benchmarking activities accurately reveal positive and negative performance (all benchmarking activities organization-wide), and (c) purchasing benchmarking accurately demonstrate positive and negative on the organization as a whole (purchasing activities' impact on an organization). With no established *green* standards, organizations can create and define their benchmarks to document success and failure. Yasin (2002) argued that more research is needed to develop benchmark practices in emerging markets. Khanna and Palepu (2010) identified emerging markets as financial markets that have yet to materialize to a capable potential. *Green* products and services arguably are an emerging market.

Goods and services under EPP spectrums typically cost more and have lesser quality when evaluated against established comparable alternatives (Barber, Kuo, Bishop, & Goodman, 2012; Kemp, 1993). Purchasing departments have difficulties in weighing historical best combination of price, quality, and service, along with modern political influence of EPP suggestions, guidelines and policies. Even if buyers make sound, convincing arguments for a purchasing decision, it can be overruled by other organizational stakeholders with differing points of view. Conflict begins when a buyer is challenged on decision-making processes when alternatives are viable. Stakeholders may be concerned about price, quality, delivery, supplier reputation, or attempt to influence a buyer to purchase from an exclusive supplier. When a buyer's decision based on sound purchasing techniques, principles, or standards are challenged, supportive internal

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elements can help minimize selection conflict. Organizational leadership may need to rule by a final judgment that may not be based on best practices in the purchasing discipline.

Worldwide universities are taking active roles in EPP. An association called International Alliance of Research Universities (IARU) (2011) consisting of ten world-renowned research-intensive universities that share a similar global vision was formed in 2006 to enhance tolerance and empathy for differing cultures. Each university is committed to reducing environmental adverse impact through several sustainable campus strategies. Collaboration with these ten universities has initiated expansions of cross-cultural relationships to advocate best practices in campus sustainability programs. IARU is actively creating green prototypes for other universities to review, evaluate, and implement to address their objectives.

Statement of the Problem

It is unknown how identifiable principal influences affect the design, implementation, and day-to-day operations of an EPP program in a university purchasing department. A detailed literary review revealed key influences studied for this case led to discipline areas of (a) organizational and department design; (b) leadership; (c) buyer behavior; and (d) environmental outreach. It is also unknown if and how these key influences affect EPP independently and dependently.

Menon, Menon, Chowdhury, and Jankovich (1999) identified the 1990's as "the decade of the environment" and do Paço and Raposo (2009) confirmed that there continues to be a noticeable growth in global environmental recognition, knowledge, and activities. Growth has developed from various types of entities. In support of the

environmental movement, along with IARU another association focused on higher education. The Association for the Advancement of Sustainability in Higher Education (ASSHE) (2005 – 2012) has taken an active role to promote sustainability efforts in higher education by providing resources, professional development, and networking through conferences, webinars, workshops, and publications. ASSHE believed that educational institutes have a fundamental responsibility to provide society with information, promoting the importance of environmental, social, and economic forces along with enhancing skills to address sustainability issues.

Wingard (2001) argued most organizational stakeholder groups see sustainability efforts as significant to organizational goals. In a show of importance, there is a variety of federal, state, and local governments as well as national and international community groups and action committees supporting or mandating environmental activities. Aggressive actions from worldwide perception is requesting (or in some cases requiring) organizations to devote more attention to environmental issues (Buysse and Verbeke, 2002; Harris and Crane, 2002).

Weber, Current, and Benton (1991) conducted a comprehensive review of 54 different supplier studies, identifying 22 criteria weighed and used in purchasing decisions. Of the 22, dominate criteria were traditional cost, quality, and delivery. Braglia and Petroni (2000) concluded weighing of criteria is situational and thus, differs based on the current state of circumstances. No studies were found to identify weight criterion for *green* products and services in a university setting.

EPP refers to formal actions in a purchasing process to obtain *"green"* or "environmentally friendly" goods and services. Purchasing environmentally friendly

goods and services can be a difficult objective to achieve due to various and uncertain influencing factors. Determining characteristics of products and services and weighing its impact on the environment is a comprehensive ordeal (Coggburn & Rahm, 2005). Currently, there is no known combination of management behaviors, processes, and practices to effectively implement and maintain an effective EPP program in a university purchasing department. It is not clear how the four areas of (a) organizational and department design; (b) leadership; (c) buyer behavior; and (d) environmental outreach influence an EPP program at a university purchasing department.

Purpose of the Study

The purpose of this qualitative multiple case study was to explore behaviors, processes, and practices associated with four interdependent constructs in an attempt to understand and explain how they impact an EPP program within a university purchasing department. At this stage in the research, the four constructs of (a) organizational and departmental design; (b) leadership; (c) buyer behavior; and (d) environmental outreach will be generally defined as influencing activities and their effects on achieving EPP goals.

This study utilized the well established and extensively cited Eisenhardt approach for multiple case studies (Eisenhardt, 1989). Literature review for this study supported the Eisenhardt model in Harris and Crane (2002), Woodside and Wilson (2003), and Eisenhardt and Graebner (2007). A search on Google Scholar (2013) indicated that overall the Eisenhardt (1989) approach has been cited by over 24,000 papers.

Rationale

Yin (2009) and Eisenhardt (1989) support a qualitative case study be used when research involves an analysis of influences from various data sources focusing on a particular condition. Eisenhardt's (1989) article provided a step-by-step process to arrive at a study conclusion. This step-by-step process creates a "roadmap" that builds on the works of Miles and Huberman (1994), Yin (1981), and Glaser and Strauss (1967).

Research is designed to use collected data to determine relationships between organizational structure, leadership support, and buyer characteristics practiced within universities that purchase environmentally preferred products and services. Salkind (2000) added that qualitative case studies often lead to further research. This subject focus of university purchasing departments can be expanded to other organizational types by researching active influences in their perspective industry.

Influential areas of data sources were gathered from four fields of study: (a) organizational and departmental design: (b) leadership: (c) Buyer behavior: and (d) environmental outreach. Organizations and departments are designed to be efficient and effective in achieving goals (King, 1995; Magnier-Watanabe, & Senoo, 2008). Nelson (2003) argued that design is also influenced by internal and external environments. Even though purchasing activities are finite (Clopton, 1984; Cousins, Lawson, & Squire, 2006) a surge of EPP activities places the discipline in a dynamic state of information exchange (Azzone & Nucci, 1998; Cousins et al., 2006). To measure EPP effectiveness within a university setting, organizational and department structure plays a critical role.

This case study approach began with a literary review on modern day purchasing department structures in various organizational types, industries, and markets. Studies led

to four distinctive categories of interest, (a) organizational and department design; (b) leadership; (c) buyer behavior; and (d) environmental outreach. The literary review initiates open-ended questions to conduct interviews with participants and feedback from the expert panel (focus group). Interviews were conducted at the convenience of the participant and the location of the organization.

Research Questions

1. How do organizational and departmental designs influence purchasing decisions in an EPP program within a university purchasing department?

2. How does leadership influence the implementation and operation of an EPP program within a university purchasing department?

3. How does buyer behavior influence the implementation and operation of an EPP program within a university purchasing department?

4. How do current trends in environmental interests influence purchasing decisions in an EPP program within a university purchasing department?

Significance of the Study

It is unknown how identifiable principal influences affect EPP in a university purchasing department. EPP is an accepted concept, and universities and other organizations are required, asked, or pressured to implement programs that increase participation (Harris & Crane, 2002; Kagawa, 2007; Min & Galle, 2001; Stephens, Hernandez, Roman, Graham & Scholz, 2008). This study adds to the body of knowledge addressing managerial approaches intended to achieve EPP goals. Because such a program has many constructs carrying different weights, values, impacts, and understandings, arguably there is no standard way to implement, operate, and monitor an EPP program that

will fit all organizations (Atherton & Giurco, 2011; Schlegelmilch, Bohlen, & Diamantopoulos, 1996). Significance of the study is to analyze combinations of managerial actions and their effects on organizational goals and provide guidance to improve future efforts to implement, operate, and maintain an EPP program within a university purchasing department.

Understanding the effects of influences regarding an EPP program process assists management in process design with a clearer focus on program efficiency and effectiveness. This focus will help the mechanics of the processes involved. Leadership will gain valuable knowledge linking useful techniques to motivate the human element towards program goals and process mechanics.

Ultimately the knowledge gained from this study will help inform a more effective design and deployment of EPP's in other universities. The four areas of (a) organizational and departmental design; (b) leadership; (c) buyer behavior; and (d) environmental outreach offer organizations options on how to implement based on personal goals and objectives. Glock and Hochrein (2011) stated that the identified constructs and relationship concepts are not unique to universities but are common influences in other types of organizations.

Definition of Terms

Buyer or agent. Employees that act on behalf of the principal who is responsible for researching, negotiating, and committing to pay for goods and services (King & Ritterskamp, 1998; Schwarcz, 2010). Glock and Hochrein (2011) expanded responsibilities to acquire specialists to help assess and decide supplier contributions that sustain organizational mission.

Commodity. "An article of trade or commerce, especially a product as distinguished from a service" (Khumalo, 2012). "A good or service completely specified physically, temporally, and spatially" (Becker & Lazaric (2003). Anderson, Coltman, Devinney, and Keating (2011) defined as a good or service that has minimal if any indistinguishable components and sold mainly on price. Core make-up of a commodity is well known, constant and standard.

End-user or customer. The organization or person that receives a product or service (Anonymous, 2014). Employees who are served through the acquirement of desired goods and services (Giunipero, Ramirez, & Swilley, 2012).

Environmentally friendly. Activities took to protect or enhance the environment by minimizing harmful behavior from the organization (Thompson, Strickland, & Gamble, 2005). Romero, Lin, Jeffers, and DeGaetano (2014) referred to actions that "save the planet" and "reducing carbon footprint."

External environment. Huzey, Betts, and Vicari (2014) defined in five categories – influences from industry, local government, state and federal government, supply chain and other stakeholders. Sefiani and Bown, (2013) added opportunities and the constraints natural in the setting in which they operate.

Goods or products. A tangible-physical item for consumption (Schaefer, 2009). Items that can be seen and touched (Sonmez & Moorhouse, 2010).

Green marketing. Activities took by organizations to introduce environmentally friendly goods or services in an effort to generate customer satisfaction (Tan, Yeap, & Peik, 2012). Yakup and Sevil (2011) identified as a holistic management practice that identifies consumer needs and balancing profitability and sustainability. Chen and Chai

(2010) defined as activities taken by organizations to distribute environmentally sound goods or services that address customers and society's satisfaction.

Green movement. Encompasses areas such as "*green* buying," Environmentally Preferable Purchasing (EPP) by government agencies and organizations in the private sector, Environmentally Benign Design and Manufacturing (EBDM), and Socially Responsible Investing (SRI) (Fok, Zee, and Hartman, 2012). Actions took for the preservation of the environment (Chen and Chai, 2010).

Internal environment. Factors include funds' accessibility, organizational willingness, top management strategic support, and products' characteristics and demand uncertainty (Saprikis and Vlachopoulou, 2012). Stefanovska (2014) added strategy, structure, systems, management style, staff, skills, culture, and shared values.

Operations. Successive transformation stages (Hellriegel. Jackson and Slocum, 2008). Activities, costs, and assets required to transform inputs into a desired output through a production format (Thompson, Strickland, and Gamble, 2005).

Program. Storbacka, K. (2012) defined as "A relational capability, involving task-dedicated actors, who allocate resources of the firm and its strategically most important customers, through management practices that aim at inter- and intra-organizational alignment, in order to improve account performance and ultimately shareholder value creation."

Services. An intangible activity (Schaefer, 2009). Auxiliary or periodical activities that are performed to enhance the primary product (Hawkins, Best, and Coney, 2001).

Assumptions and Limitations

Assumptions are considered methodological, being common beliefs shared by researchers in various areas of study. With several constructs, assumptions are vast but can be limited to the following major points:

1. No two organizations have identical internal and external environments (Nelson, 2003).

2. Formulas used by universities to determine the best price, quality, and service while incorporating EPP concepts may be inconsistent (Braglia & Petroni, 2000: do Paco & Raposo, 2009).

3. Strength of purchasing activities designed through a centralized or decentralized structure may influence participation and ability to influence end-user or internal customer (Coggburn, 2004; Gansler, 2003; Gianakis and Wang, 2000).

4. Commitment and resources allocated to administer EPP concepts may impact university dedication (Drumwright; 1994; Dutton and Dukerich, 1991; EducationMoney.com, n.d; Kiron, 2014).

5. Information received from interviews is honest, open, and accurate (Baumhart, 1961; Rest, 1979; Whetstone, 2003).

6. No one leadership style is applicable to EPP design at a university (Armandi, Oppedisano, and Sherman, 2003; Bass, 1990; Bowie, 2000; Covin, Kolenko, Sightler, and Tudor, 1997; Emiliani, 2008; Stanford, Oates, and Flores (1995).

7. Buyer qualifications, buyer commitment, and buyer techniques are not consistent (Bensaou, 1999; Coulson-Thomas, 2010; Fawcett, Magnan, & McCarter, 2008;

Goh, Lau, & Neo, 1999; Polonsky, Brooks, Henry, & Schweizer, 1998; Squire,

Cousins, Lawson, & Brown, 2009).

Nature of the Study (or Theoretical/Conceptual Framework)

Conceptual framework identifies constructs and relationships between four areas of

(a) organizational and departmental design (Hart, 1995; Inayatullah, 2005; King,1995;

Koehler, 1990; McCann, Selsky, & Lee, 2009; Nelson, 2003); (b) leadership (Armandi et

al., 2003; Freeman, Piece, & Dodd, 2000; Sarros and Santora, 2001; Scott, 2003;

Smeltzer (1998); (c) Buyer behavior (Michaels, Day, and Joachimsthaler, 1987; Newall,

2006; Rasmusen, 2004); and (d) environmental outreach and their effects on EPP

(Coggburn, 2004; Drumwright, 1994; Garrido Samaniego, Gutiérrez Arranz, & San José

Cabezudo, 2006).

These four constructs focus directly and indirectly on EPP goals of organizations.

Nelson (2003) stated that to be effective in achieving its purpose and efficient in use of

resources, organizational and departmental design begins with a detailed knowledge of

influences from the external environment. With this understanding, organizational and

departmental design takes into consideration human, financial, and technical resources,

processes, policies, procedures, accountability, and communication to promote

effectiveness and efficiency (Sor, 2004).

Leadership styles (Fawcett, Magnan and McCarter, 2008; Sarros and Santora,

2001) are implemented to complement organizational and departmental designs that

include operations, goals, skill sets, characteristics and qualities of followers to develop a

desired culture forming the internal environment. Sarros and Santora (2001) added

successful leaders possess such traits as technical knowledge, people skills,

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communication, trust, honesty, compassion, empathy, negotiating, time management, and consideration. Design and leadership take into account the critical human resource; the buyer.

The buyer is the professional on the "front line" of EPP. Buyers must be skilled in contract law, policies, procedures, research, technical knowledge, negotiation, and people skills. Feisel, Hartman, and Schober (2007) added team-building, strategic, and communication to buyer skills. To succeed in each situation, buyers juggle the complexity of internal needs, external opportunities, and competing stakeholders (Min & Galle, 2001).

Organizational and departmental design, leadership, and buyer activities are structured to direct behavior to goals of EPP. Azzone and Nucci (1998) and Cousins et al., (2006) agreed EPP is in a dynamic state with organizations weighing alternatives and choosing decisions that are seen as a best fit. Because of volatility and infancy of *green* purchasing (Gupta & Ogden, 2009), there is no one set way to implement an EPP program. Through (a) organizational and departmental design; (b) leadership; (c) buyer behavior; and (d) environmental outreach, gaining such knowledge can significantly impact achieving organizational goals. Conceptual framework displaying four constructs independently and dependently influencing EPP, along with internal and external environments is illustrated in Figure 1.

Internal Environment

EPP

External Environment
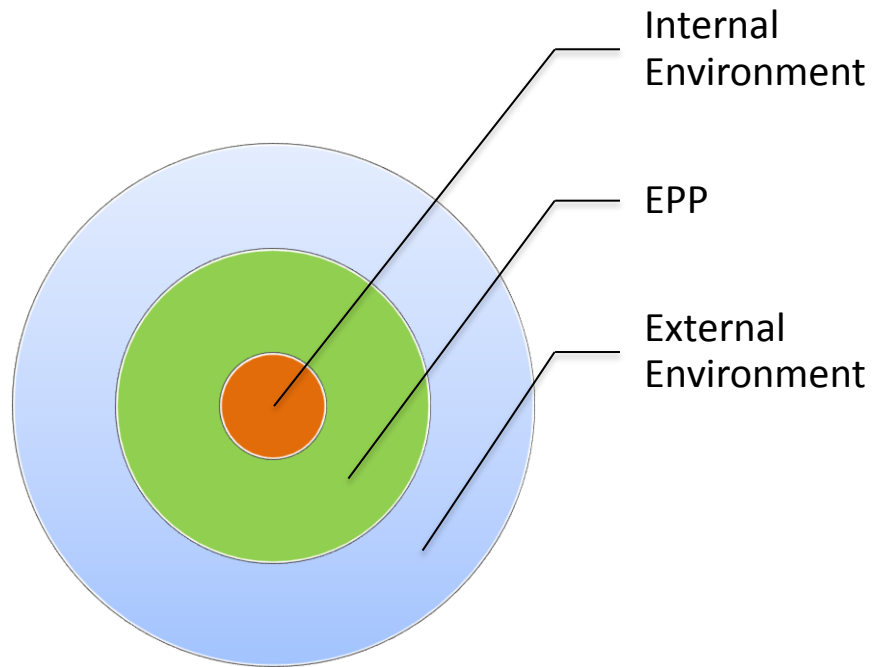
Figure 1. Conceptual framework of influences impacting EPP. Internal environment contains constructs Organization and Departmental Design, Leadership, and Buyer Behavior. External environment includes constructs Buyer Behavior and Environmental Outreach.

Organization of the Remainder of the Study

Four chapters follow. Chapter 2 focuses on four areas of relevant literature: (a) organizational structure; (b) leadership; (c) buyer awareness; and (d) environment. Articles referenced in each area explain depth and complexity of such topics from related perspectives and its direct relationship and impact on purchasing activities. Chapter 3 includes research design, interview questions, instrument used, population, data

collection, and analysis. Chapter 4 displays results and analysis of data collection.

Chapter 5 contains study conclusions, contributions to the body of knowledge and

literatures, and recommendations for additional research.

CHAPTER 2. LITERATURE REVIEW

Chapter 2 reviews literature relevant to *green* purchasing in universities. Detailed research produced four general areas pointing to goal achievement: (1) the structure of the department that provides EPP and its supporting organization; (2) leadership styles that promote EPP within a culture; (3) buyer qualifications that span *green* product knowledge, negotiations, and persuasion; and (4) qualities and lifecycle of EPP products and services. All four areas can be analyzed independently or combined, demonstrating dependency.

Literature review focuses on four critical aspects relevant to EPP success or failure. First section discusses the importance of organizational and departmental design purposely structured to achieve objectives effectively and efficiently. Garzella and Fiorentino (2014) and Hart (1995) argued organizational competitive advantage is the relationship between internal capabilities (design) and its external influences (environment). Second section reviews significance of an active and appropriate leadership style to attain desired objectives such as Environmentally Preferable Purchasing (EPP). Feisel et al., (2007), Huang, Kristal, and Schroeder (2010) and Smeltzer (1998) connected successes in purchasing change management with leadership situational competence. Third section examines professional buyers who address daily challenges and conflicts using proven techniques, skills, training, experience, and a reliable support structure. Pressey, Tzokas, and Winklhofer (2007) stated the importance of buyer qualities to match internal and external influences. Final section concludes with social and governmental impact of environmental issues detailing expectations for both supplier and consumer. Guenther, Scheibe, and Farkaccova (2010) informed that *green*

purchasing has an impartial outcome on the environmental value chain that connects producers to consumers.

Universities and Organizational Design

To sustain their mission, universities are typically designed differently than for-profit and governmental organizations. Universities are structured to achieve both educational and research objectives utilizing business support departments assembled to add organizational value and to assist in their mission. University business support departments do not operate autonomously as a responsible professional business entity but operates to sustain organizational mission (Gopal, 2013; King, 1995). When a new objective as *green* purchasing is introduced, questions arise of what (if any) design changes are required for a successful implementation and to what extent. Do suggested modifications of processes impact only internal operations of a purchasing department or do modifications extend to university stakeholders both internally and externally?

Nelles & Vorley (2010) believed a university's primary reason to exist is to educate students. Wangenge-ouma and Langa (2010) and King (1995) believed there is no single objective for a university. King (1995) identified four distinctive academic characteristics:

1. It exists for social, autonomous, and individual purposes, not just economic.

2. Academic freedom from universities allows for existing and new ideas to be scrutinized.

3. Universities follow a standard influenced by peer review.

4. Academia best handles success of academic issues, standards, courses, and quality through needs in society.

An objective of organizational design is to build structures that effectively and efficiently manages organizational activities to achieve goals. King's (1995) four characteristics suggest that academic structure of a university cannot be designed to match business requirements. Gopal (2013) contradicts King's belief with an example of a college in disarray. The college president turned to the faculty in the Business Department to review needs and establish sound business practices. Because of its bureaucracy and culture, one can argue that academia cannot succeed in a 100% business structure designed for strict control. All organizations require support from indirect departments to enhance direct department functionality. Academia needs support services to allow scholastic and research fields to focus on their particular purpose. Such support services are business-oriented administrative functions designed to meet supportive objectives effectively and efficiently.

Effective organizational designs are based on influential dynamics (or lack) of its internal and external environments (Koehler, 1990; Nelson, 2003). An organization in a dynamic environment is designed to change quickly in response to significant modifications in its industry (McCann, Selsky, and Lee, 2009). A properly structured organization in a dynamic environment is labeled as organic and demonstrates characteristics as informal, decentralized, customarily verbal-horizontal communication, team concept design, and members possess limited qualifying form of experience before joining. An organic structure operates best when activities are nonroutine, high task variation, limited management span of control, with procedures being informal, vague, or nonexistent. Organic organizational structures are based on team or project assignments to address objectives. Aiken and Hage (1971) and Wang and Ahmed (2013) stated that an

organic organizational structure is better equipped to manage change associated with new technology when compared to a bureaucratic style. An organization in a dynamic environment must have minimal bureaucracy to continually adapt and survive (Ford, 2009). Stahle and Hong (2002) added that all components (e.g. divisions, schools, and departments) that make up the organization are involved in cooperative dialog in an effort to continually assess and improve its components and as a whole.

If McCann et al.'s (2009) concept was accepted in a dynamic environment, then an opposing view may be logical for a stable environment. An organization in a stable environment does not need to be structured for change and can take advantage of longer periods of time to adjust in stages when needed. Such an organizational design is labeled as mechanistic and has characteristics that are formalized, centralized, written top-down communication and members are formally trained to handle specified tasks that are known and proven to contribute to goals. Lichtenthaler (2007) felt that centralization can theoretically refer to abilities that provide explicit directions while expending minimal coordinated effort. Studies also suggest a centralized structure allows for a more effective implementation of external knowledge. Stahle and Hong (2002) stated that a mechanistic environment is based on traditional top-down management style built on a hierarchical structure defined by functional units. Organizations that operate in mechanistic environments experience stability and higher level of work quality. Mechanistic structures work best when activities are routine, minimal task variation, wide management span of control and procedures are formal. Studies from Lester and Parnell (2008) suggest that larger organizations are centralized to nurture growth, improve

customer service, and organizational efficiency whereas smaller organizations are decentralized for similar objectives.

Within one organization, there are often conditions when some functional departments operate in a dynamic environment, and other departments operate in a stable environment. Arguably, a university is such an organization. Nelles and Vorley (2010) stated that universities have missions of teaching and research. Hamadat, Al-Jammal, and Al-Khasawneh (2013) agreed with King's (1995) explanation of academia characteristics suggested a dynamic, organic structure to express ideas, formulate theories, and research allowing freedom of change. A scientific research program within a university department is also in a dynamic organic state, interacting with influences based on a dynamic changing of its internal and external environments. Such research experiences frequently change and require its environments to change with progress. For such a research activity to be efficient, it should be structured as organic.

Other departments within universities operate in a stable environment where internal and external environments change slowly over time. Slow changes in environments allow for departmental operations to be routine (Stahle & Hong, 2002). Routine procedures permit management science to study process effectiveness over time, in an effort to reduce utilization of resources, hire and train at will, and more easily measure progress towards goals. University support operations are examples of stable activities. HajShimohammadi and Wedley (2004) acknowledged decentralization in maintenance activities refers to management activities, not its process. Facilities departments provide plumbing, electrical, and carpentry requests on a regular basis. Each trade (and, therefore, its processes) remains technically constant with only physical work

locations changing. A university admissions department may review their processes once a year to discuss if any minor modifications are required to improve recruitment processes. It also may be argued that purchasing activities in a university can be classified as a stable environment. Goods and services may change over time but modern purchasing processes are definable by models (Chen-Lung, Ru-Jen, Krumwiede, Stickel, and Sheu, 2013; Clopton, 1984), and talent required is known and identifiable suggesting purchasing qualifies as a stable discipline.

Departmental or unit structure are designed to support goals and not based on competencies of individuals or functional units (Stahle, 1998). Stahle and Hong (2002) clarified that mechanistic structures rarely achieve innovative strategic goals, and a dynamic structure is never fully effective, suggesting that goals are drivers for organizational structures. Koehler (1991) stated four areas guide development of organizational structure: (a) type and diversity of operations; (b) geographic locations; (c) stage of organizational maturity; and (d) management style and capabilities. Organization's operating in a stable environment typically benefit with a centralized structure allowing specialized staff members to focus on common organizational issues and like functions. Due to variables in all stages of the purchasing process, purchasing department qualifies as a function requiring specialized staff (Bartos, 1974; Martinez and Gitlow, 2011).

Inayatullah (2005) believed structure concepts are more flexible to handle future-oriented organizational objectives. Due to technological advancements, organizations transfer more information electronically, allowing for faster and better decision-making. Sor (2004) stated that organizational structure accommodates informational quality,

quantity, and accuracy required to operate and achieve goals. Inayatullah (2005) argued current structures are not designed to handle a progressive environment, and Lester and Parnell (2008) added decentralized organizations with a limited networking capability may find it a problem to operate efficiently. Future-oriented organizational structures are based on following criteria (Inayatullah, 2005):

1. Tools—Systems that assist in individual and organizational change.

2. Strategy—Organizational plans to direct towards desired goals.

3. Capacity building—Ensuring organizations have abilities to change when needed.

4. Memes—Ideas that reproduce within a learning organization

5. Emergence/self-organization—Qualitative transformation; moving out of comfort zones to encourage new ideas.

6. Microvita change—From recognizable deep levels of reality, using different thoughts and different levels of consciousness to change grounded thought and action

Purchasing management techniques have changed over years, but not as quickly as other disciplines functioning in a dynamic environment. As with many professional disciplines, changes in purchasing are typically tested in practice or theory before an incremental implementation. Wolf (2005) provided an example where an organization took ten years to evolve from one dimension (transactional) to its next (strategic). Specifically to purchasing, substantial changes over time have been experienced in two critical areas:

1. Purchasing has become more strategic with a smaller number of buyers that are highly qualified and specialized, non-value steps have been decentralized to other organizational units, and higher emphasis is placed on planning activities and supply management (Cousins, 2002).

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2. Relationship approaches have replaced adversarial approaches building on shared resources, product development, process redesign that improves efficiency for both buying and selling organizations (Lingreen & Wynstra, 2005).

Traditionally Purchasing's goal is to obtain a best possible combination of price, delivery, quality, and service (Braglia & Petroni, 2000). Wolf (2005) stated that Purchasing's goal is minimizing costs while meeting functional requirements. Abilities to maximize contributions to its organization are strongly related to Purchasing's position, attention, and power provided directly and indirectly within its structure designed and approved by the leadership. An effective design structure for purchasing complements its full spectrum of objectives and abilities to contribute to organizational needs. Critical necessities include acknowledgment of specialized resources enabling purchasing to utilize strengths and knowledge of its discipline. Highly educated and experienced purchasing professionals incorporate management science into organizational operations, benefiting from proven standards and models. Such a position within its organizational structure are appropriately and formally acknowledged and supported through organizational leadership (Ahmad & Ghayyur, 2014; Michaels et al., 1987).

Change Management Impact on Organizational Design

All organizations are open systems that require interaction with its environment (Scott, 2003). For organizational survival, design adapts to internal and external changes that impact operations. Daft (1998) stated that an open system must interact with resources it imports and exports to its environment. With changes in consumer behavior, organizations regularly monitor and adjust in three distinct areas: (a) identify and predict

consumer needs, (b) enhance processes to be efficient and effective, and (c) efficient use of resources.

Organizational structure can improve or hinder change in behavior influenced by activities from internal or external environments (Koehler, 1991; Nelson, 2003). Adaptation is a function of *change management*. Change begins from a known state to an unknown state; weighing levels of uncertainty. Some organizational members see change as an optimistic challenge (Polonsky et al., 1998) receiving new objectives with loyalty, excitement, and commitment. Other members see it pessimistically as a personal test in which they may not succeed, resulting in failure and possible termination (Alasadi and Askary, 2014; Smeltzer, 1998). Weymann (2001) added resistance to change is due to a natural human condition first to take care of personal well-being. When change threatens well-being, one's natural instinct is to resist. Organizational structure can be designed to accommodate change but is no substitute for *change management* techniques.

Ford's (2009) studies indicate *change management* activities in mechanistic organizations are more effective in achieving desired outcomes when compared to organic. This statement contradicts reasons for being organic, to allow for easy change. Changing quickly and changing effectively are two different independent measures; time versus quality. An organic structure can change more rapidly and more frequently whereas a mechanistic structure takes longer to adapt to a new behavior. Organic structure is time-oriented; mechanistic structure is quality-oriented. For organic structures to be time-oriented, structures are designed to minimize steps and activities. By design, organic structures are less bureaucratic sacrificing quality for speed. McSweeney (2006) argued structures that minimize bureaucracy cannot grasp diversity and complexity

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needed for immediate organizational change. Ford's (2009) view agreed with McSweeney's (2006) position arguing organic structures sacrifice quality for time it takes to change.

Size and impact of implementing environmentally focused activities has a direct relationship to organizational processes. Guenther et al., (2010) provided three different classifications for obstacles that hinder an organization's conversion to environmental responsibilities. The first classification is allowance, having two distinct areas of focus: legal restrictions and company objectives. Legal regulations and guidelines can be vague, ambiguous or without specifics that are typically required to make decisions in confidence. With legal environment unclear, *change management* can be apprehensive. Legal regulations may also be complex, making it difficult for a smooth and timely conversion. Organizational objectives may support environmental activities in theory, but because of obstacles may not be able to apply proper resources to be effective.

Second classification is knowledge and information. This classification consists of familiarity with recognized green industry activities, movements, and current costs of products and services. Hatala and Gumm (2006) stated information for such decisions is influenced by several stakeholders with differing objectives. It is difficult in this classification to assign weight factors to various elements presented as information impacting *change management*. Azzone and Nucci (1998) reminded that the *green* industry is in a very dynamic state. Obtaining accurate information is timely and may be very difficult to compare similar features due to lack of industry standards (Wenk, 2008).

The final classification is the willingness and confidence to make managerial changes and actively progress towards environmental responsibilities. In late 1990s,

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authors of ISO 14001 certification stated that environmental standardization is in its infancy (Wenk, 2008). Any discipline, practice, or industry in its early stages is filled with uncertainty, companied by trial and error. Beyer and Lodahl (1996) advised that uncertainty and risk can be minimized by organizational structure, resources, and abilities of leaders to motivate members. To identify and overcome obstacles, leadership demonstrates in words and actions examples of confidence that clearly express environmental responsibility activities will succeed (Freeman, Piece, & Dodd, 2000).

Centralized Vs. Decentralized or Mechanistic Vs. Organic

Professional discipline performance is enhanced within a structure that promotes its mission (Scott, 2003). Purchasing was once considered a clerical function, not a professional disciple as currently viewed (Cousins, Lawson, & Squire, 2006; Person & Gritzmacher, 1990). Bensaou (1999), Crespin-mazet and Portier, P. (2011), Foerstl, Hartmann, Wynstra, and Moser (2013), Jap (1999), Kralijic (1983), and Metcalf, Fear, and Krishnan (1992) supported the understanding that purchasing functions have evolved from a transactional or decentralized operation to a relational or centralized structure. Efendi, Kinney, Smith, & Smith (2013) listed organizational benefits in a centralized purchasing structure in administrative costs, cost-effective purchases, and control of expenditures and inventory. Conversions from transactional or decentralized operations to relational or centralized structures enhance reverse marketing, total quality management (TQM), and restructuring models in global completion (Liker & Choi, 2004).

Gianakis and Wang (2000) stated management prefers a centralized purchasing function in efforts to control traditional purchasing management values of efficiency,

effectiveness, and the economy. Since purchasing is a focal point for organizational expenditures, purchasing processes are more efficient working in a centralized structure. A centralized structure is effective in handling professional tasks, more economical to negotiate larger purchases, and provides tighter financial control (Freeman & Cavinato, 1990).

Gansler (2002) countered by saying that a centralized buying function is too bureaucratic, adding bottom line costs to companies who desire to be suppliers, taking too long to complete purchasing processes, with final results not necessarily relating to higher quality in goods or service. Management in favor of decentralization streamlines processes by reducing and deregulating internal policies while continuing to focus on traditional purchasing management values (Coggburn, 2004).

Organizations wanting to enhance financial control and accountability of spend prefer the use of the formal Purchase Order document function generated from a centralized Purchasing Department. Parikh and Joshi (2005) added that a centralized Purchase Order process is based on procedures and policies to provide enhanced control of cash flow, inventory management, and increase transparency that discourages fraud. Controls implemented with Purchase Orders present a significant overhead cost compared to non-purchase order methods.

Organizations find that cost versus benefit ratio for Purchase Order use is not efficient for low-cost and low-risk items. Parikh and Joshi (2005) recommended a less expensive process such as a credit card that is issued to departmental staff with financial accountability. Organizational credit cards would be used to handle identified low cost and risk purchases.

Murray (2001) explained challenges experienced in converting a customary clerical purchasing unit into a *green* purchasing design managed by professionals. Strategic conversion begins with a first step necessary to reach objectives: disbanding decentralized concepts and creating a focused and centralized structure. New structure design focus is effectively to support purchasing strategies centered on environmentally friendly behavior and accepted purchasing practices. Zhu, Dou, and Sarkis (2010) added due to the nature of combined influences from internal and external environments; *green* purchasing activities are more complex, adding more difficulty for a successful conversion.

Murray (2001) identified three environmental strategies for engagement: (a) ensure that all purchasing practices result in a cost-effective and environmentally responsible manner; (b) Purchasing Department supports direct and indirect organizational sustainable efforts; and (c) increase Purchasing Department profile through communication to meet and exceed organizational objectives. To measure progress in these three environmental strategies, the following points require monitoring: (a) identify progress of tasks within strategy; (b) track time of defined tasks; (c) document obstacles observed and addressed; (d) success of strategies in task; (e) success of task; and (f) document unintended outcomes. Studies from Murray (2001) concluded (a) majority of identified tasks were within strategy; (b) most tasks were completed ahead of schedule; (c) unforeseen obstacles addressed contributed to the strategy in a unexpected way; and (d) outcomes included department accolades and organizational recognition.

Argyres and Silverman (2004) conducted a study on effectiveness and efficiency of another department with a professional discipline, Research and Development (R&D). This study found that departments in a centralized structure produced more ideas from several perspectives when compared to a decentralized department. Departments in a centralized structure also conducted more detailed research outside of the norm and worked within the budget. Top-level management found there was a better ratio between input (dollars spent on particular department activity) and output (valued achievements). The study also indicated a mixed structure matrix (centralized and decentralized) leaned towards efficiencies of a decentralized structure, thus not able to maximize input to output department ratio. Pleshko and Nickerson (2008) differed, stating that an organization with a mixed matrix structure can take various forms across the spectrum. Such variations allow organizations to operate at higher levels of effectiveness and efficiency.

Hierarchy Concepts

Department structures within organizations are not the only critical factor for effectiveness, for its position within its organizational hierarchy is also crucial to meaningful functionality. Dumond (1996) defined organizational hierarchy as its relationship of functional units and information producers to create value. The science of organizational structure coupled with hierarchical design is critical to survival. Design can aid or hinder organizational ability to achieve goals (Koehler, 1991; Nelson, 2003). Hierarchy concepts take into consideration complementary disciplines and processes in an effort to achieve synergy through common goals with minimal use of resources and

duplication of efforts. Hierarchy in an organization is usually represented by an organizational chart suggesting relationships, responsibilities, and accountabilities.

Purchasing Departments' position in the organizational hierarchy has no direct relationship to purchasing techniques, quality of staff, or organizational influence. Department contribution is dependent on efficient use of its professional discipline with leadership support (Ahmad and Ghayyur, 2014; Michaels et al., 1987). Purchasing can report directly to the President or CEO and have buying functions decentralized throughout many organizational areas. In this function, Purchasing's primary objective may be to establish policies, procedures, preferred supplier list, monitor decentralized behavior and negotiate contracts for common goods and services. When a Purchasing Department is consulted in a decentralized design, typically the action provides minimal influence on individuals' buying decision (Bennett, 1986; Smart & Dudas, 2007). In a centralized structure, most buying activities are handled by professional buyers allowing for organized control of products and services entering the organization. Within its responsibilities, a centralized purchasing function operates as a control point for funds expended to obtain goods and services. Cousins (2002) stated a decentralized Purchasing Department does not distribute value-added tasks, only tasks that can be handled by others with minimal risk to the organization. When making significant changes in buying behavior such as a program to promote an EPP strategy, a centralized or mechanistic structure is more effective.

Department value within organizational structure has a direct effect on *change management*. Divisions, departments, and units in formal organizational charts are symbols of status, ranking, and importance (Johnson, Leenders, & Fearon, 1998).

Departmental positions closer to top levels suggest significance in its function, directly relating to time and distance to communicate needs, ideas, and solve problems. Unlike the communication between several layers, direct reports have the advantage of using verbal communication more frequently. Communication channels available can effectively enhance or unintentionally inhibit *change management.* In a random sampling of organizational charts for 10 universities, Rutgers University (2009), Yale University(2010), Villanova University (n.d.), University of Virginia (2009), Carlow University (n.d.), University of California–Santa Cruz (2009), and John Hopkins University (2004), Purchasing Departments are positioned two levels down from their President (70%). Cornell University (2010) and University of Washington (2009) are positioned three levels down (20%), and University of Southern California (2009) is positioned four levels down (10%).

Structuring for Green or Environmental

Porter and van der Linde (1995) argued organization structures required to support an efficient *green* program outweigh new administrative costs over a long term perspective. *Green* programs in organizations are viewed as good stewards of the environment and its community, giving favorable consideration from various stakeholders (Drumwright, 1994). Such impressions can be difficult to measure in cost versus benefit comparisons.

Woods (1991) contended through corporate society responsibility, society, and business are tightly related. Early stages of environmental studies within organizations used data that was not accurate; implicating such organizations lied about their capabilities or used questionable social responsibility measures. Such studies are

inconclusive and question maturity of its industry and abilities for organizations to provide meaningful information (Woods & Jones, 1995).

Post and Altman (1992) stated environmental issues are more universal than other social issues and go much deeper than superficial organizational functions. An organization changing to become more environmentally friendly is expected to change its processes, policies, and practices. To be effective, change also includes its human resource and design of its organizational structure efficiently to manage new goals (Russo & Fouts, 1997). Dutton and Dukerich (1991) argued a commitment to environmental behavior must be implemented and regarded as part of organizational culture, influencing policies, procedures, job design, recruitment and selection, and job training. A strong commitment by leadership will naturally create a favorable environmentally friendly corporate image. Fombrun and Shanley (1990) warned initial corporate image is easy to advertize, but once established, it is hard to change once it is viewed as positive or negative. Typically when an organization has earned a negative image, it remains associated with other organizations in that industry (Fombrun & Shanley, 1990).

Athey (2008) and Post (1978) believed political skills of management play a significant role in development, implementation, and utilization of environmental policies. Political skills are defined as abilities to influence an objective in a way to convey, promote, or manage a perceived positive corporate image. Actions of management through direct and indirect activities form organizational culture and environmental behavior. As organizations work independently or in unison, its industry experiences a kind of evolution. As industries evolve, sustainability activities will become a norm in impacting organizations and customers will heavily influence

survivors and failures (Dean, Fowler, & Miller, 1995; Garzella & Fiorentino, 2014; Hart, 1995).

Guenther et al., (2010) stated within an organizational structure Purchasing is considered the gatekeeper for incoming products and services and outgoing funds. Purchasing plays a critical role in the development, implementation, and maintenance of the organizations environmental responsibility (Buysse & Verbeke, 2002). Purchasing is only one component that contributes to organization's environmental responsibility. Guenther et al., (2010) presented eight primary organizational units that play key roles in a program's success:

1. Procurement (Purchasing) Department: Decides on or influences purchases of goods and services

2. Internal (end) user: Makes initial requests and uses good or service

3. Finance Department: Establishes spending behavior with cost limits, approvals, and policies

4. Environmental Department: Provides information, consulting, and advice concerning environmentally friendly products and services

5. Other stakeholders: Provides expectations to leadership directly or indirectly concerning environmental development and behavior

6. State: Creates regulations, directives, guides, and laws impacting environmental activities

7. Market: Introduces products to satisfy customers

8. Customers: Dictate desires through buying behavior

Leadership Role

A university's leadership determines purchasing Departments' location in its organizational hierarchy and how they are designed. Leadership is the influential

relationship existing between leaders and followers and is used to control behavior in an effort to meet organizational goals (Braynion, 2004). Cangemi, Burga, Lazarus, Miller, and Fitzgerald (2008) stated leaders define and share organization's mission, are visionaries and convince stakeholders of a preferred direction in future objectives. Good leader's progress organizations to new heights through experiences of new situations. Implementing a new purchasing structure to handle EPP effectively requires a leader to have skills and characteristics to change what can be considered to be a culture.

According to Eken, Özturgut, and Craven (2014), leadership is defined as a process where an individual influences a group of people to work towards a common objective. De Pree (1989) and Romanowska, Larsson, and Theorell (2013) believed leadership is an art to be learned and experienced over time, not by only reading literature. Leadership is more based on relationships then users of information. Sarros and Santora (2001) added leader's who use inspirational techniques set high standards for achievement and communicate visions and ideas to followers explicitly and clearly. Followers in turn, work beyond their usual standards promoting both personal and organizational growth. Participating executive leaders are active with subordinates, inspire, reward and correct them, and if needed to achieve goals, replace non-achievers for group unity. Followers know what is expected and understand opportunities of success and failure.

Cyr and Chun (2010) and Dansereau, Graen, and Haga (1975) believed *leader-member* exchange theory describes processes for roles and expectations between leader and each subordinate. This theory states a high exchange relationship is built on trust, respect, and mutual exchange. Leaders provide desired outcomes for subordinates by

assigning challenging tasks and additional responsibilities in exchange for higher rewards. Subordinates are expected to be loyal to their leader and committed to assigned work. A *low exchange* relationship states subordinates are expected to complete all formal aspects of assignments, and additional benefits or rewards are not provided by the leader (Yukl, O'Donnell, & Taber, 2009). Graen and Uhl-Bien (1995) stated to maximize subordinate contribution; a leader develops a *high exchange* relationship with as many subordinates as possible.

Armandi, Oppedisano, and Sherman (2003) agreed that leadership theories are based on behavior to influence others. Early studies focused on what characteristics make up a leader, not tactics used to lead successfully. Leader traits and behavior theories were used to identify characteristics and behavior. Stanford et al., (1995) believed that there are three primary classifications of leadership theory: (a) personal behavior (personal qualities or behavioral styles), (b) traits (inherited characteristics), and (c) contingency (situation). Strang (2005) summarized leadership theory in five main features:

1. A trait or characteristic.

2. A goal or behavior.

3. Executive attribute.

4. Use of power over others.

5. Processes to motivate, influence, inspire, coach, mentor, or facilitate.

An effective leader performs many critical roles independently and interdependently in efforts to achieve success. As in many aspects of management science, desired leadership qualities and tactics are situational (King, 1995; Sethuraman, & Suresh, 2014). Organizations experience changes in both internal and external

environments that influence leader's actions. Such influences dictate importance, implementations and desired results of various critical roles. Fitzgerald (2007) presented eight roles a leader plays in an organization:

1. Collaborative developer of vision, mission, and core values: Awareness of future.

2. Creator of a humanistic work environment and developer of trust: Growth/adaptation and empathy.

3. Developer of people and builder of capabilities: Enhanced performance.

4. Initiator of organization-wide communication: Perception observance.

5. Role model: Emotional intelligence, intuition, passion.

6. Utilizes strategic analytical data: Directed, focused knowledge.

7. Risk taker who seeks consensus: Decision-making.

8. Change agent: Competitive strategies

Fitzgerald (2007) classified these eight roles into four leadership assets:

1. Awareness and knowledge: Make invisible visible in today's environment.

2. Vision, intuition, and passion: Improve vision into potential future.

3. Growth and adaptation: Enhance anticipation of risk versus reward.

4. Integrity and empathy: Establish consistent decision-making criteria.

Responsibilities of leadership are quite complex and requires knowledge in various skill sets. Peters and Smith (1998) argued leadership skills must be learned to implement roles properly and at appropriate times. Typically newly assigned leaders are quickly placed in a crisis with little time for learning appropriate skill sets that address the dilemma. Crisis situations and active fluctuations in internal and external environments, coupled with role complexity suggest programmed leadership

development is imperfect. Leadership is affected by an ever-changing impact in direct and indirect variables. Cangemi et al., (2008) stated topics on leadership arguably are most written of all published in business and industrial worlds, and added that there are a growing number of universities offering courses in leadership theory. Peters and Smith (1998) believed there is no literature available to prepare a person to lead others into unknown areas. A leader asks right questions at right times and instinctively uses a proper combination of Fitzgerald's (2007) eight roles, learning from the outcome. In leadership, learning is doing (Peters & Smith, 1998).

In addition to skills, leaders possess values that match organizations' culture, mission, and its unique situation. Washington, Sutton, and Feild (2006) agreed with England and Lee's (1974) seven areas where values can influence a leader's behavior. Area's include (a) how leaders view situations; (b) process and results developed to address problems; (c) interaction between leaders and organizational members; (d) assessment of individuals and organizational successes; (e) extent of unethical behavior; (f) reaction to pressure; and (g) performance of management. Russell (2001) added honesty as a most welcomed characteristic of a leader.

Clawson (1999) suggested four key signs of honesty in a leader: (a) speaking truth; (b) keeping promises; (c) treating others fairly; and (d) respect all individuals. Values of a leader and self-person must complement each other or behavior will soon favor one or the other. Snyder, Dowd, and Houghton (1994) added personal values of leadership include service to others, humility, integrity, honesty, and hard work. De Pree (1992) added justice, personal restraint, concern for common good, and courage are also critical personal values for a leader.

Many confuse leadership characteristics with managerial characteristics. Managers and leaders have different roles and responsibilities within an organization. Bennis (1989) and Raisiene (2014) believed in the concept that leaders have a long-range outlook and are innovative whereas managers usually have a short-range perspective, handling day-to-day needs. Kearsley (2005) compared these difference with short responses: (a) managers administer and leaders innovate; (b) managers copy and leaders are original; (c) managers maintain and leaders develop; (d) Managers focus on systems and structure, and leaders focus on people; (e) Managers rely on control and leaders inspire trust; (f) managers have a short range view and leaders have a long-term perspective; (g) managers ask who and when and leaders ask what and why; (h) managers focus on bottom lines and leaders focus on horizons; (i) managers imitate moreover, leaders originate; (j) managers accept status quo and leaders challenge status quo; (k) managers are good soldiers and leaders are their persons; and (l) managers do things right and leaders do right things.

Kearsley (2005) concluded no one person is capable of possessing all needed qualities and characteristics identified to be a leader. King (1995) and Sethuraman and Suresh (2014) reminded leadership qualities and tactics are situational that are influenced by changes in internal and external environments. Along with changes, individuals react differently to situational change and leaders must be observant to recognize follower's behavior and know proper leadership response. Leadership success is based on utilizing correct techniques at appropriate times. Between varied skills, leadership type, personal values, principles, commitment, knowledge, experience, honesty, various roles,

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complexity of goal, and follower contributions, it 's hard to argue with Kearsley (2005)

that a leader cannot be perfect for all stakeholders in every situation.

Leadership Behavior

Senior management not identified or assumed as leaders by organizational

members still retain responsibilities for overall welfare and success of its organization.

Emiliani (2008) presented another responsibility of senior management as eliminating

waste and inefficiency while minimizing the negative impact on key stakeholders. Senior

management is characteristically accepted as goal setters, and organizational members

are goal achievers. In their role, senior management not only develops strategic plans to

take their organization from a current state to a future state but also set a tone for

organizational behavior and its culture (Mainardes, Ferreira, & Raposo, 2014;

Kippenberger, 1998).

Because all organizations differ in mission, its structure, internal and external

environmental influences, and resources, leadership attributes, and skill behavior must

effectively match its current situation. Leadership is situational; organizations first

identify objective and obtain appropriate leadership trait of *task* or *relationship oriented*.

A leader with a *task oriented* trait is one that supervises activities closely, tells members

what is expected and allows no room to deviate. A *relationship-oriented* leader view

members as a valued contributor to goals listens to ideas and works to develop a trusting

relationship (Meyer, Becker, & Vandenberghe, 2004). Because a university's mission is

to educate, cultures of such organizations are always evolving; changing with influences

from internal and external environments (Wangenge-ouma and Langa, 2010; King,

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1995). A leader with traits that do not match this type of situation is likely to fail in achieving desired objectives.

Eken, Özturgut, and Craven (2014) identified three styles of leadership, *autocratic*, *democratic*, and *laissez-faire*. In an *autocratic* leadership style, decision-making is centralized with few taking responsibility for organization's achievements. *Democratic* leaders encourage stakeholders to be an active part of decision-making processes, promoting ideas and willingly accepting feedback. *Laissez-faire* leadership is a style that does not regularly try to influence followers. Leader's function is to motivate subordinates to achieve goals. Cangemi et al., (2008) recommended supportive (e.g., democratic) leaders treat all subordinates with respect and understand their needs and desires. Ahmed, Ismail, Amin, and Ramzan (2013) and Michaels et al., (1987) added a leader that involves buyers in task priority and process discussions will also see a reduction in role ambiguity and role conflict.

Managerial techniques and influence in higher education differ from for-profit and most not-for-profit organizations. Leaders in higher education tolerate existence of narrow-minded tenured faculty, defend funding of research and programs, and handle day-to-day activities within an organizational design that is highly bureaucratic and promotes little accountability (Carlin, 1999). To become more efficient, Board-of-Directors now require higher education to run as a business, using financial controls to manage such typical reporting as profit-loss and return on investment (ROI). Transitioning to business concepts allows senior leadership to implement and use proven management science techniques and models to assist in short and long-term goals and demands. Strategic discussions and decisions allow for recognition of changes in

technology, new internal and external environments, and changes in organizational

culture (Martin & Marion, 2005).

Michaels et al., (1987) stated behavior of purchasing leaders is a key to an

organizational buying culture focusing on four points: (a) natural expectations assigned to

a leadership position; (b) behaviors directly affecting buyers' job performance and job

satisfaction; (c) behaviors directly affecting buyer stress; and (d) managerial power to

influence buyers and buying functions. Clopton (1984) and Ertekin and Atik (2012)

added that leadership behavior will affect a buyer negotiating techniques. Close

monitoring by leaders induces adverse buyer behavior resulting in increased job stress

and perceived reduced task flexibility. If a buyer does not feel leadership support, buyer

behavior will have a negative impact.

Leadership Power

Leaders and management use power to obtain and retain control. Power in

organizations is desirable to mold culture and influence behavior to address goals

(Cangemi, 2005; Miller, 2005). Management organizations are commonly listed as

having three levels: executive or upper, middle, and low or line. Forms of power existing

at all three levels of management are designed to maximize the use and preferred

behavior of organization's human resource. Clegg and Hardy (1999) stated power is a

legitimate strength when employed by an appointed leader. Management should refrain

non-leaders with no accountability from using such power so not to mislead actions

towards organizational goals. Shackleton (1995) confirmed leadership studies are not

complete without addressing issues of power and influence. To be successful as a leader

and to benefit in one's professional life, Sheldon and Parker (1997) stated it is essential to establish a base of knowledge in all understandings and uses of power.

Scholars argue that power in leadership can be acquired from two categories: formal assignment or personally earned. Jayasingam, Ansari, and Janton (2010) recognized five bases of power derived from organizational or personal characteristics. *Legitimate* power is power formally authorized by an organization due to position responsibilities within organization structure. Raven (1992) argued an organization has a right to direct and control members as authorized and sanctioned by organizational position and added that effects of *legitimate* power are noticeably inconsistent within organizations. Yukl (2010) along with Anuinis, Ansari, Jayasingam, and Aafaqi (2008), found that *legitimate* power has no significant effect on a leader's success.

Coercive power is the ability to discipline. Raven (1992) argued authorized organizational agents have rights to inflict various types of discipline to subordinates within legal limitations. Anuinis et al., (2008) believed use of *coercive* power by a leader is an indication of their ineffectiveness and weakness to conform others to a preferred behavior. The third power, *reward* power, is abilities to allocate rewards. Anuinis et al., (2008) found mixed results when a leader has implemented *reward* power, whereas Elangovan and Jia (2000) found a use of *reward* power unrelated to a leader's effectiveness. For *reward* power to be productive, Jong and Harlog (2007) suggested that culture and reward systems must be designed to encourage positive behavior.

Expert power is based on individual's knowledge, skills, experience, judgment, and expertise in a specialized field (Jayasingam et al., 2010). Anuinis et al., 's (2008) studies found *expert* power has a direct relationship to leader's ability to succeed. Yukl

(2010) added subordinates of leaders expressing *expert* power are more satisfied with their job and work performance. Macneil (2003) stated *expert* power has more of a positive influence on process behavior than any other power because it is knowledge based and not assigned by an organization.

The fifth power is *referent* power, being individual's personality. *Referent* power is a positive inspiration experienced by subordinates as a result of assigned duties. As with *expert* power, Hinkin and Schriesheim's (1989) and Randall (2012) believed use of *referent* power shows that subordinates are more satisfied with their job and work performance. Expected actions of *referent* power also include personal mentoring and internal consulting to raise levels of knowledge to both individuals and organization (Ribiere & Sitar, 2003). Distribution of a leader's knowledge builds trust, promotes social interaction, and encourages others to share knowledge.

The first three powers of *legitimate*, *reward*, and *coercive* are provided and sanctioned by organizations, commonly in writing. The final two powers of *expert* and *referent* are characteristics of individuals. *Expert* power is based on learning, experience, or a formal education in a particular area. *Referent* power is based on using personable attributes to win people over. Covin, Kolenko, Sightler, and Tudor (1997) formed two different leadership approaches based on organizations and individuals. Powers given by organizations are labeled as *power influence* and determine leader's effectiveness by use and source of assigned available powers. The second approach is called *behavior*, which is based on individuals. Yukl (2010) argued that leadership power comes from three sources and not two being organization and individual. Three identifiable sources are *position, personal,* and *political*. *Position* can be argued to be powers sanctioned by

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organizations and *personal* as characteristics of individuals. EL- Hajji (2014) defined

political power as day-to-day activities where an individual or group places more

importance on personal interests or personal agenda's over organizational activities to

achieve goals.

Hinkin and Schriesheim (1989) stated there are seven forms of power, agreeing

with *expert, reverent, legitimate, reward*, and *coercive* and adding *connection* and

information. Connection power is connected to relationships, associations, interactive

communities, and information networks. Raven (1992) supported the importance of

information power stating its control of or connection to knowledge.

Strang (2005) stated leadership can be studied from three perspectives: (a) input,

(b) output, and (c) final result. Much writing discusses inputs, being a composition of

leadership characteristics for particular situations but comparatively less on outputs and

causes and effect. Yukl, Kim, and Falbe (1996) addressed outputs, stating that there are

four areas of outcome when influenced by leadership tactics:

1. Internalization: Follower is committed to goals and vision while being
   independent of rewards.

2. Identification: Based on intent and relationship, follower initially obeys but
   will mimic leader if he/she becomes less involved or committed.

3. Instrumental: Follower will only comply for a reward.

4. Resistance: Follower is opposed to goal processes, makes excuses for
   noncompliance, tries to influence leader to use other alternatives, goes to a
   higher authority to plead case, delays and procrastinates, sabotage, or refuses
   to comply.

Jayasingam et al., (2010) and Stanford et al., (1995) supported theories that

leadership power is dependent on particular situations. Organizational size also

influences a leader's power. Formalization of large organizations typically provides clarity in leadership power assignment, usage, and capabilities. Jayasingam et al., (2010) stated top managers in small organizations typically have problems in identifying powers they possess. Small organizations have people performing many duties that overlap or provide gaps that are not identified. Lack of formality can lead to confusion and inconsistency. Leaders in small organizations are more successful using more *reward* power and less *coercive* and *legitimate* powers (Jayasingam et al., 2010). Universities may be considered large because of student count but administratively considered small by number and level of employee scope of responsibility.

When assessing influence of leadership and power, it is easy to underestimate its impact on organizations' governance control. Coulson-Thomas (2010) believed that Boards-of-Director are looking for their organizations to be more innovative in adopting programs addressing environment issues and becoming more socially responsible. Programs are to be cost-effective and related to policies that direct desired outcomes. Martin and Marion (2005) added Boards are requiring leadership to utilize power to be more active in organization effectiveness.

A Board's vision of leadership to be pro-environmental may contradict Milton Friedman's (1970) perspective on how organizations should operate. Friedman believed organizations should do what is best for themselves only in efforts to satisfy customers in their marketplace while remaining efficient, effective, and as profitable as possible. Friedman's philosophy will only consider environmental practices if the organization benefits. If markets are encouraging corporate environmental products and programs, Friedman believed organizations should move in that direction as long as they can profit.

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If markets are not influencing organizations or if such a move will hurt organizations, they should refrain. Friedman believed political influence should not champion an EPP program concept. Customers' buying power and social perception are an important factor for an organization to change practices in order to remain competitive and increase profits.

Leader as a Change Agent

Cangemi et al., (2008) stated that a leader and a change agent are one and the same. An individual who has characteristics to initiate change and see it through to success can be labeled a leader. Change agent objectives present several obstacles that can hinder a smooth access to goals. It is a human nature and, therefore, an organization's nature to challenge change in operational behavior. Change represents unknown and with unknown there is concern for abilities to survive in the new situation (Alasadi and Askary, 2014; Smeltzer, 1998). Senior management through leadership, behavior, and action, play a critical role in organizational change. Senior management dictates through formal policies, mandates, and clear, direct communication to subordinates how they want organizations to perform to achieve short, medium, and long-range goals. Senior management determines importance and methods of communication effectively demonstrating importance and preferred course of action. Direction can be general, leaving it up to organizational members to determine paths and utilization of resources as deemed appropriate. Direction can also be specific, coordinated by an appointed leader whose responsibility is to coordinate all resources and allotted funding to achieve the goal.

When a leader is responsible for change, organizations must determine if change requires a *transactional*, *transformational*, or a *servant* leader. Bass (1990) identified *transactional* leaders as ones who promise rewards and benefits to subordinates to fulfill organizational goals. Daft (2002) stated that a *transformational* leader is one that first identifies needs to subordinates, and then defines processes to fulfill needs. Greenleaf (1977) and Washington, Sutton, and Feild (2006) identified a *servant* leader as one who serves others rather than self and understands the leadership role as a servant. Each leadership style is unique and for an increased chance of success the type of style selected by senior management must be a fit for situations.

Burnes (2004) advised two-thirds of all process transformation projects fail. It is essential that leadership carefully examine *change management* tactics when focusing on purchasing process transformations. Free, Briers, Chua, and Lucket (1999) and Roy (2003) found few in-depth studies conducted in areas of purchasing process transformation, so change activities need to be carefully monitored to confirm progress is focused on its overall objective.

Smeltzer (1998) found no literature review for research between executive leadership and purchasing management change programs. Harris and Crane (2002) added there is a good deal of encouragement from society to adopt additional environmental responsibilities within organizations, but concluded there is no empirical evidence of leadership wanting to change behavior to embrace sustainability as an organizational culture. Lack of topic publications questions the relationship between successful purchasing initiatives and quality and quantity of executive leadership support.

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Limited or lack of executive support may be due to one or more of several possibilities. It may be that executives see purchasing change programs as a natural course of discipline evolution, thus staying away and letting dominant arguments control destiny. Executives may not have appropriate experience to anticipate short and long-term organizational risks and benefits (Smeltzer, 1998). Executives may see *green* purchasing as a menial exercise in public image; not critical to organizational survival (Harris & Crane, 2002). If EPP programs do not have full, energetic executive support, activities are left to purchasing management to convince other's to commit voluntarily. Unless it is a directive from executive levels, such efforts rarely achieve its full objective. Members who join forces to alter established activities are often required to change internal operations, asking all followers to work with something new or different. Such a change can place hardships on cooperative members for it may take several job cycles to educate, train, and fit workers to a new methodology. Depending on the nature of job and complexity of change, a job cycle can take anywhere between a few weeks to a few years before it is tested and accepted.

To remain effective, organizations adapt to its ever-changing environments. Cangemi et al., (2008) believed only leaders can create internal climates to adapt to its environment. *Change management* is a relatively new management concept initiated to help organizations remain competitive. *Change management,* regardless of origin of disciples, requires some form of executive involvement to assess the credibility of suggested change and its connection to its organization. A university with a decentralized structure is not designed to adapt quickly and successfully to a *change management* endeavor; as in this study, change being *green* activities. Disciplines initiating change

create an understandable and effective argument to obtain executive level support (Carter & Narasimhan, 1996).

In Smeltzer's (1998) study of 42 organizations, not one purchasing initiative was successful without leadership and executive level support. This study suggests that for purchasing to entice change, executive support is required. Purchasing typically does not carry enough clout alone within organizations to implement change. Purchasing management must have robust communication skills to articulate change and demonstrate its benefit to various levels within its organization. Harris and Crane (2002) stated that communication has more success when it begins at the executive or leadership level and is delivered top-down throughout its entire organization. Utilizing Harris and Crane (2002) findings, for greater success purchasing would plead their case for change to the executive level, have the idea endorsed and communicated down through the organization intended as an executive level directive.

Developing an EPP program at a university can be somewhat painless in a theoretical sense, for many universities, and other types of organizations have documented and developed purchasing programs with EPP being a preferred social behavior. Literature from suppliers and users exists on organizational conversions from non-*green* to *green* activities. A significant challenge is obtaining comprehensive organizational adoption of an acceptable EPP program. Without strong and effective leadership from executive levels, programs can be a waste of valuable time and resources. Once developed, initiating and incorporating an effective EPP program within a university environment remains a significant challenge. Development processes must include *change management* techniques and a leadership strategy to minimize human

tension natural with change. Executive levels and appointed leaders are responsible for organizational welfare and behavior. Harris and Crane (2002) stated the road to a successful EPP program begins with complete buy-in from leadership. Leaders who resist and contest demands to become more environmentally concerned will see their organization acquire a damaging image (Russo & Fouts, 1997).

Not all change initiatives are started at Board or executive levels. A logical solution to an organizational problem can knowingly and intentionally acquire grass root support, forming an imposing internal delegation difficult for leadership to ignore or reject. Drumwright (1994) explained many policy concepts are initiated from management's lower level and presented up to leadership as solutions to identifiable problems. Many policies formulated from low levels eventually supported by leadership have been tested to be more successful than policies initiated by the leadership core. Such policies have greater success when focus is on solving a known and current business problem of substance. Problems within functional units create inefficiency and typically generate a flow of information to higher levels, looking for problem solutions. An effective formal feedback process is designed to processes allowing leadership quick access to the stated problem and improvement suggestions. Nelson (2003) confirmed that feedback is required to assess progress and change strategies existing as a formalized concept of systems theory.

Studies confirm characteristics for successful bottom-up policy development: (a) initial concern is to solve a problem; (b) focus is on a particular task; (c) leadership at first plays a minor but supportive role; and (d) originators of possible solutions are creative, politically knowledgeable, and detailed in understanding a corrective process

(Drumwright, 1994). Three areas to improve and motivate top-down and bottom-up strategies stated: (a) leaders must accept that concept of changes in culture and systems (Muo, 2014), (b) develop decision-makers through education and direct experience (Scherpereel, 2006), and (c) formulate operation systems to confirm that skill development is a policy, not simply a method to achieve a goal (Xu & Quaddus, 2005).

Change has a serious impact on organizations, even to where it may challenge organizational culture (Birx, Ford, & Payne, 2013; Miller & Friesen, 1984). Leaders involved in building and supporting established culture may need to surrender identity and values to accept and implement new direction, beginning with creating a new culture (McCann et al., 2009). Organizational followers naturally become confused, trying to understand a connection between previous culture–process with a new culture–process. Capowski (1994) quoted Bill Gates as saying culture was created by Microsoft and its goal, not around people. People are a resource to achieve goals. Organizational goals are always the primary focus, and all resources and objectives play a supporting role.

Organizational change for environmental responsibility is more than new processes, values, and beliefs (Harris & Crane, 2002). Attitudes need to become a part of the culture. Cultural change is much more complicated than job change or department change. Birx et al., (2013) and Randolph (1995) argued that cultural change is a tremendous challenge for leaders. In a university environment whose culture is based on freedoms of academic learning and possible years of history, a supportive culture needed for an effective business environment typically is overlooked, and change impact underestimated.

Change involves organizations performing an activity in a different way; a new or modified process. To improve process performance in business environments, Parikh and Joshi (2005) noted innovation and technology are two main drivers. Bamford and Forrester (2003) added process change is based on process re-engineering, technology acceptance, agreement to innovation, implementation, and *change management* techniques. Parikh and Joshi argued that using an *equity-implementation model* (EIM) is more likely to bring successes is an environment of skilled professionals. EIM is based on equity behavior theory, which is well established and has a solid base in social and psychology sciences (Van Offenbeek, Boonstra, & Seo, 2013; Walster, Walster, & Berschied, 1978). EIM believes people's behavior is based on their personal best interest. The credence of the concept believes people will understand reasons for change and be less resistant.

Commitment to an Environmental Strategy

Kippenberger (1998) defined *strategic management* as developmental and controlling activities designed by senior management to sustain a sound and consistent behavior among decisions made for all functional units. Mainardes, Ferreira, and Raposo, (2014) explained how *strategic management* has changed over the decades and supplied a modern definition as "a broad term that includes determining the mission and objective of the organization in the context of its external and internal environments." Carr and Smeltzer (1997) explained an organization's ability to achieve strategic goals involves processes of planning, implementing, evaluating, and controlling strategic and operational decisions. Developing and successfully implementing an environmental corporate strategy requires utilization of a variety of resources including physical assets,

employee skill sets, and organizational processes (Buysse & Verbeke, 2002). Such a corporate strategy will only lead to a sustainable benefit if supported by leadership and its ability to fund and stimulate a *green* movement throughout the entire organization (Barney, 1991).

Garzella and Fiorentino (2014) and Hart (1995) believed an environmental corporate strategy requires support from all stakeholders, supporting E. R. Freeman's (1984) concept. Theory behind stakeholder approach maintains all stakeholders who influence strategy objectives and who are affected by strategy objectives are involved in designing and implementing a strategy. This involvement is intended to enhance communication and encourage strategy support. Primary stakeholders of an environmental activity would include employees, suppliers, customers, and public agencies involved in regulations. Buzzelli (1991) added formal associations within primary stakeholder group have significant influences between success and failure. Secondary stakeholders would include media and special interest groups who are in a position to communicate activities to gain social support and recognition. Buysse and Verbeke (2002) agreed that a stable relationship between corporate strategies and environmental stakeholder management is vital to goal achievement.

Green, Morton, and New (1998) informed such stakeholders as economists, sociologists, and management researchers look to find a balance before a new product or concept is introduced to society. Weighed are customer demands, government regulations, government subsidies to promote development, relationships to past scientific studies, and effect on supplying organizations' internal and external environments, coupled with social, economic, and technological impact on a population.

This complicated formula suggests innovations cannot be quickly introduced without understanding predicted impact on all stakeholders. Buyers are looked upon by university customers to be the conduit between the organization and suppliers and become knowledgeable on *green* purchases. In such times of conflict, Freeman et al., (2000) argued senior management take a leadership role in promoting pro-environmental activities only when such activities are proven to be safe, and satisfactorily address needs. Proven pro-environmental activities allow for healthier relationships between an organization and the influential stakeholders of customers, government, and activists.

Developing any strategy begins with a sound, recognizable approach that has stakeholder support based on logic, well communicated, and is identifiable to organizations objectives. Guenther et al., (2010) recommended a variety of different environmental strategies that are also applicable: (a) compliant strategy, to be fully compliant with all legal requirements; (b) informed strategy, staying knowledgeable of new developments; (c) market-driven strategy, incorporating environmental costs into marketing plan; (d) competitive advantage strategy, becoming innovators; and (e) sustainable strategy, incorporating into mission statement and goals through economical, environmental, and social aspects. All five stages can be applicable to university efforts to begin or enhance an EPP program.

For an organization to fully commit to environmental indicatives, leadership implements a clear vision into every environmental and social business decision (Guenther et al., 2010). Wingard (2001) stated that most stakeholder groups see environmental activities as important organizational goals. Leadership has a difficult job to balance varied stakeholder interest and act in best interests of the whole of the

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organization. With environmental behavior recognized as a positive behavior, establishing, implementing, and communicating activities is accepted as a commendable leadership strategic plan.

Successful change initiatives are structured to missions of departments or disciplines. For an organization's purchasing department, Janda and Seshadri's (2001) studies find leadership strategies are implemented for departments overall efficiency and effectiveness. Critical areas include (a) cooperative negotiations with suppliers; (b) minimal supplier base that can be managed; (c) strategic relations with key suppliers to share information; and (d) commit to long-term relations with crucial suppliers.

Janda and Seshadri's (2001) study confirms Purchasing's position to influence and enhance organizational functions and act as an important factor in organizations overall success, contributing to financial bottom line. Generic purchasing strategies are typically adaptable and applicable to many commodities. ElTayeb, Zailani, and Jayaraman (2010) informed environmental strategies address such environmental areas of regulations, customer satisfaction, and social responsibility that enhance business benefits in order to achieve success in environmentally friendly activities.

Green et al., (1998) concluded that purchasing plays a critical role in adopting environmental strategies. Purchasing maintains the organizational eyes and ears to its external environment. Purchasing is also in an excellent position to influence innovation, promote quality, competition, and reduce project material costs in their efforts of supplier selection and negotiations (Leonidou, 2005).

Influence in Buyer Role Development

Murray and Efendioglu (2007) stated that training is an organizational investment comparable to any other investment. Organizations typically have two avenues for training employees, utilizing internal staff or external professional trainers. Whereas external professional trainers usually teach to conventional business-discipline standards, internal training is more specific to required organizational tasks to achieve desired goals while understanding known culture. With followers expected to be honest and loyal, leaders can provide and influence training that assist their proposal, plans, and anticipated processes.

Position and people development take many forms. Leaders should be accepted as role models. Role models are often quoted, imitated, watched, studied, and analyzed (Cangemi et al., 2008). Subordinate development begins with a trusted mentor. Sarros and Santora (2001) added earning subordinate trust starts with ethical and consistent leadership behavior. Bowie (2000) argued some scholars believe leaders are primarily educators. Newton (1985) found leader education can come in two formats, imposing correct beliefs and values on learners or forming an environment where learners can think for themselves.

Effective leaders understand all influencing activities within internal and external environments. Leadership builds an atmosphere and culture of organizations through decisions and nonverbal actions. For employees to be effective, role ambiguity and role conflict are minimized, for it leads to lower job satisfaction and lower job performance (Joseph, 2012; Parasuraman, 1981; Raza, Maksum, Erlina, & Raja, 2014). Michaels et al. (1987), and Glock and Hochrein (2011) informed task complexity of a professional buyer

natural functions are prone to role ambiguity. With buyers consistently interacting with various internal departments with some having conflicting task goals, leadership's awareness to control and impact role ambiguity throughout an organization is crucial to all objectives of a purchasing function.

Sarros and Santora (2001) argued leader-follower relationships are enhanced when mechanisms and strategies are first discussed and agreed. This process relates to *Management By Objectives* (MBO) theory in which organizational, divisional, and departmental, unit, and individual intertwined. MBO process begins with goals and objectives created at its highest feasible level. Each division, department, unit, area, group, and task is individually negotiated with their supervision within units or persons assigned organizational responsibilities (Mamoon, 2013). Reif and Bassford (1972) believed all management systems are measured by its goal effectiveness and claims MBO-type processes has been successful in achieving desired results through improvements in (a) management performance; (b) planning; (c) coordination; (d) control; (e) flexibility; (f) personal relationships; and (g) executive development. For an MBO-type process to be successful, all agreed activities, goals, and measurements must be achievable, directed towards goals, and fully supported by layers of management. Taken into consideration are disciplines involved in leader-follower relationships. Leaders recognize established culture and professionalism of involved disciplines and understand complexities in buyer characteristics (Clopton, 1984; Glock & Hochrein, 2011).

Organizational structure and value of purchasing activities heavily impacts leader-buyer development. Msimangira (2003) stated in some organizations, purchasing is not

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seen as a legitimate profession and activities can be handled decentrally by end-user departments. Senior management in such organizations does not recognize purchasing professional's existence in business, thus minimizing its perceived contribution. Lack of respect for this professional discipline directly correlates to quality and quantity of buyer development (Msimangira, 2003).

Smeltzer (1998) stated purchasing activities in organizations experience change with development of innovations but agree its discipline has not achieved recognition when compared to other professional functions. Minimal awareness of Purchasing's contribution is credited to lack of direct purchasing experience at organizations executive level. Research from the Center for Advanced Purchasing Studies (CAPS) supported this theory, reporting that even though executives see purchasing functions as an important aspect of organizations, it is given limited support to increase responsibilities and awareness (Carter & Narasimhan, 1996). Activities of global competition and market fluctuations led to changes in an appreciation of Purchasing's effort, helping to maximize organizational and departmental goal achievements resulting in development of a purchasing discipline (Rozemejjer, 2000; Wouters, Anderson, & Wynstra, 2005).

Bales and Fearon (1993) added that purchasing professionals believe their efforts go unnoticed by organizational leadership when actions are not recognized and rewarded. Purchasing staff is encouraged when top management visions its function as a profit center as opposed to a cost center. Some scholars suggest that purchasing departments be considered a profit center as opposed to a cost center claiming that it can positively contribute to organizations bottom line. Min and Galle (2001) defined a cost center as a department or unit that does not add value to operational processes and a profit center can

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positively impact organizations bottom line. Min and Galle (2001) felt that most organizations identify their purchasing department as a cost center when procuring for an environmental program.

A leader has ultimate responsibilities to develop staff to perform effectively and efficiently to achieve desired goals. Conforming to an EPP program within a university requires acceptance, dedication, and commitment from buying staff. Leaders apply sanctioned power and personal charisma to convert followers into a coordinated force, addressing all environmental factors. Leaders also have a responsibility to win key stakeholder support to allow processes to be effective and efficient.

Buyer Behavior and Purchasing Department Activities

Successful leaders, managers, and change agents benefit from a qualified staff to change direction. Buyers consistently work with conflicting objectives both internal and external to their organization, and interact with other stakeholders who have different views of professional and ethical behavior. These conditions naturally lead to role conflict within their organization with a buyer often placed in unfavorable situations defending roles, ethics, laws, and contractual agreements (Lindberg, 2012; Michaels et al., 1987). Jackson and Schuler (1985) and Joseph (2012) added buyers will demonstrate lower levels of job performance due to employee role ambiguity and role conflict as a result of job demands. Zhao and Rashid (2010) define role ambiguity as lack of clear information and role conflict as multiple activities and expectation that effect performance. Conflict is notably observed when perceived expectations are based on connections between effort-to-performance and performance-to-reward situations.

Clopton (1984) and Wang, Li, Ross, and Craighead (2013) stated formalized purchasing processes minimize inconsistent actions and reduce buyer role conflict. Studies suggest work disciplines with strong professional rules and ethics define role clarity and its loyal members practice preferred behavior with an honorable desire to do what is professionally best for an organization (Donnellan, 2013; Rogers & Molnar, 1976). Many behavioral actions are determined and judged through lenses of varied professional disciplines with a wide job scope and autonomy impacted through peer cultivation (Landeros & Plank, 1996).

Buying processes are complex combinations of steps and alternatives consisting of many independent variables that fluctuate and influence each step. The initial step is identification of a need for an organizational member and ends with receipt of good or service and is satisfied. Ordinary, complexity along with unlimited number of independent variables has generated several studies on buyer stress. Buyers' roles are usually independent and are difficult to capture accurately in a job description. Ackfeldt and Malhotra (2013) and Jackson and Schuler (1985) warned task independence can lead to role ambiguity, stress, and role conflict if job design is casually implemented. Michaels et al., (1987) defined *role ambiguity* as degrees to which clear information and direction is provided for known expectations and known performance and *role conflict* as degrees of incompatibility with role expectations and others role expectations. Bolat, Bolat, and Yuksel (2011) added *role ambiguity* reveals feelings of uncertainty from lack of clarity concerning job duties, responsibilities, tasks, and objectives, creating role stress.

Role ambiguity and *role conflict* are logical reasons for job stress. Field studies from Clopton (1984) and writings by Zachariassen (2008) actively demonstrate job stress

influences a buyer's negotiation tactics and vendor selection through their hesitation to communicate to stakeholders. This behavior has an adverse effect on negotiating tactics utilized for the betterment of organizations. Conversely, Joseph (2012) and Parasuraman (1981) added other studies suggest a strong positive relationship between job clarity and job satisfaction. Guinot, Chiva, and Roca-Puig (2014) agrees with Michaels et al., (1987) position stated a buyer's responsibility is subject to stress for three reasons: (a) role requires expanding tasks into uncommon areas; (b) large numbers of stakeholders involved in business transactions; and (c) nature of job responsibility is being a problem-solver. Feisel et al., (2007) agreed with the complexity of buyer responsibilities. Buyers not only serve as barriers between an organization and its external agents but also have roles to obtain and distribute information to key stakeholders within their organization and work with internal groups to coordinate buying process activities.

Studies also confirm an increase in buyer role conflict naturally increases role ambiguity. When an employee is unclear about their role and responsibility to department and organizational goals, job required information and direction of output becomes more generalized, leading to vagueness and uncertainty in task progress (Jackson & Schuler, 1985; Mofoluwake & Oluremi, 2013). As a result of ambiguity, buyers are uncertain how to prioritize related tasks and hesitant to fulfill perceived expectations (Michaels et al., 1987; Wood, 2008).

Feisel et al., (2007), Giunipero, Denslow and Eltantawy (2005), and Michaels et al. (1987) affirmed a buyer's internal and external environments are ones of natural uncertainty. Existing business dynamics of changing prices, advancement in commodities, product development, suppliers entering and existing markets, product

availability, available funding, and biased internal demands create a stressful work environment for professional buyers. Decisions are based on information from multiple sources coupled with conflicting internal demands. Buyers handle conflicting demands and uncertainty by establishing relationships with key resources internal and external to the organization. Geersbro and Ridder (2010) added business relationships are vital to business success, thus deemed as "critical resources." Håkansson and Ford (2002) advised that no business relationship is under total control by either party, contributing to a buyer's uncertainty.

Ghosh (2008) stated personality is a core trait in business decision-making. Research relating personality and decision-making were conducted with three different personality traits: (a) *need for certainty*, (b) *self-confidence*, and (c) *need to achieve*. A person with *need for certainty* conducts research and gains knowledge before making a decision, compared to another making a snap judgment, guesses, or using probabilities. *Self-confidence* is a trait where people believe in their personal characteristics to make best decisions. *Need to achieve* is task-oriented and devoted to complete tasks as scheduled and at high-performance standards.

High *need for certainty* and *need to achieve* attributes of a buyer supports Drumwright's (1994) theory of a buyer's natural delay in any change conversion that may impact their ability to purchase successfully for an organization. Committing to *green* commodities is a significant change in buyer behavior and, therefore, may not be a quick and smooth transition. With increases in certainty, transitions to new products eventually change a buyer's skeptical position and personal beliefs in social responsibility buying.

A critical aspect of buyer behavior is not only abilities to make logical decisions but also abilities that hold up to ethical standards. Ethical decisions are structured from a social contract theory founded on community accepted behavior norms (Robertson & Ross, 1995). Donaldson and Dunfee (1994) believed that social engagements exist at two levels: macro-level, appealing to rational populations and micro-levels of communities who agree and consider acceptable actions as ethical obligations. Individuals at the macro-level understand and accept this general concept whereas individuals at micro-levels typically belong to many communities, such as employers, families, friends, religious, professional groups, and other social groups.

Within specific micro-communities, Richardson (1990) discussed an importance of identifying norms to resolve ethical problems. In professions of buying and selling, norms are typically established through legislation and professional organizations influenced by each discipline. Baumhart (1961) and Rajeev (2011) believed that employees may act unethically when under pressure to perform. They may consider end results to be more relevant than professional or ethical principles. Each decision made by decision-makers is based on a confident reference point with decision alternatives determined by probable gains and losses at a point in time. It has been found organizations that incorporate codes of behavior into their culture and daily activities observed a reduced number of unethical decision behaviors (Hegarty & Sims, 1978; Rajeev, 2011). Rest (1979) and Segal and Lehrer (2013) contended ethical decision making is a product of a person's moral development through life's experiences, suggesting that the inner-self plays a critical role in professional buying functions.

Forker and Janson (1990) and Segal and Lehrer (2013) presented evidence where purchasing agents and managers received bribes, gifts, and business meals from suppliers in an effort to influence their decisions on awarding contracts and sales in their favor. Plank, Reid, and Green (1992) provided data on approximately 15 studies dealing with ethical purchasing behavior in some specifics of business meals, advertising events, tickets to sports or entertainment, expensive wide-ranging leisure activities, small and large gifts, and cash. Rest (1979) defined four areas that lead to ethical or unethical decision making: (a) individual must be able to recognize situations and understand impacts of their actions; (b) individual must be able to link moral reasoning with actions; (c) individual must be able to determine values that are most significant; and (d) individual must be able to formulate, implement, and execute a plan of action.

To assist with ethical decisions, Rezler et al., (1992) developed the Professional Decisions and Values Test (PDV) assisting to determine relationships between ethical decision-making and values in legal and medical disciplines. Because contract law is a legal function for purchasing professionals, PDV tests are deemed an appropriate test for purchasing agents. PDV tests consists of seven values: (a) autonomy, independence of action; (b) beneficence, obligation to help legitimate concerns; (c) confidentiality, not to divulge secret information to nonparticipating parties; (d) harm avoidance, actions will not damage others; (e) justice, equal distribution of benefits and problems and fair allocation of resources; (f) professional responsibility, obligation to observe rules and regulations of discipline; and (g) truth, transparency of all critical information, whether positive or negative. Reidenbach and Robins (1990) administered this test in a purchasing environment using a population of certified agents with years of experience in various

organizations. Findings suggest a corporate culture of cooperation where members strive to serve their personal interests and interests of their co-workers. Findings also demonstrate a cause for concern of purchasing agent behavior regarding ethical behavior, even though values associated with the purchasing profession were known and acknowledged as important personal values for agents to achieve task obligations.

Models and techniques employed to perform daily duties are fundamental elements in buyer behavior. Negotiation processes are critical factors in the success and arguably demonstrates personal, professional, and trained behaviors. Neslin and Greenhalgh (1983) and Tu (2012) pointed to several studies that predict outcomes of two-party negotiations as demonstrated in buyer-seller negotiation activity. Theories point to two different types of models: ones based on outcome and others based on process. Outcome-based theories predict negotiation results without the use of disciplined techniques, such as negotiating skills, environment, or influences. Process-based theories predict results based on methods used to achieve the objective.

Bonoma (1979) presented theory results of buyer-seller negotiations that are a result of the interaction of three distinct elements: *conflict, power,* and *influence*. Dellech (2012) agreed with Bonoma (1979) position that *conflict, power,* and *influence* are critical components in formal negotiations. *Conflict* suggests that each party has opposite interests; buyer wants lowest prices to save their organization money, and the seller wants high prices to increase corporate profits. Broad areas of conflict are typically determined by current supply-demand and economic conditions. A buyer's market, meaning seller's product is highly competitive generally results in lower prices for buying organizations.

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A seller's market suggests product is in demand allowing for higher prices for supplier organizations.

Tedeschi, Schlenker, and Bonoma (1973) added that conflict can be expanded into three classifications: *pure conflict, pure coordination*, and *mixed motive*. *Pure conflict* is experienced when party's negotiation proposals are in direct opposite. In game theory, *pure conflict* situations are referred to as zero, indicating no interaction (Chau, 1996; Kasabov, 2007). *Pure coordination* exists when parties' negotiation proposals are in direct agreement. Dequech (2013) defines *pure coordination* as both parties working in unison to obtain the same objective. This can be labeled as cooperation and opposed to any formal negotiation. In *pure coordination*, each party experiences predicted benefit. Negotiating points carry different weights (values) to parties. A lower price, for example, may result in a longer delivery schedule, or more inferior quality may contribute to faster delivery. Most buyer-seller negotiations occur in *mixed motive*, where both parties make sacrifices to accommodate interest points (Newall, 2006).

Power is the second element and is natural, accepted, and a professional role for a buyer or seller. Authority for a buyer or seller is established by *agency law*, legally granting a representative to act on organizational principles (King & Ritterskamp, 1998; Rasmusen, 2004). There are four different types of power of authority available to agents from *agency law*. These powers define activities when purchasing agents, or other organizational representatives require specific authority legally to perform an agreement on behalf of the principal. Seller's classification in *agency law* is equivalent to a buyer. The first type of authority is most commonly titled *actual express authority*. *Actual express authority* is the authority granted to an agent by the principal and is an aspect of

the agent's job. The second type of authority, titled *actual implied authority,* compliments *actual express authority* by allowing agents to perform related duties to complete transactions. This authority includes negotiating payment terms, method of delivery, and directly related incidentals not specified in buying aspect of express authority.

The third authority is titled *apparent authority* in which there is no formal position between agent and principal. In *apparent authority*, agent behavior convincingly suggests to a third party (seller) that the agent (buyer) is authorized to negotiate and legally solidify a transaction (Laby, 2012; Means, 1962). *Apparent authority* is based solely on third parties' perception. The fourth authority known as *estoppels* is applicable when a principal is in a position to intervene and object to authority by agent use, but chooses silence or a supportive role. Actions or inactions of a principal suggest that representing parties are sanctioned to perform such duties. The fifth authority is *ratification*, in which a principle confirms actions of an unofficial agent after event has concluded. Ratification provides agent with authorities similar to *actual express* authority and principal accepts such actions (Rasmusen, 2004). King and Ritterskamp (1998) added a sixth authority, titled *emergency authority*. This authority is available for crisis situations outside any other authority. *Emergency authority* is used in rare and unusual cases when a principal or designee is not available, and an immediate decision is required for organization well-being. This type of authority is designed to protect both parties when an official agent authority is unavailable.

Bonoma's (1979) final element is *influence*, in which interpersonal characteristics are used to sway negotiations to one's favor. Examples include bluffing, argumentation,

concessions, and threats that benefit or risk progress to a mutual agreement. Neslin and Greenhalgh (1983) and Tu (2012) stated negotiation skills involve the use of judgment by selecting interpersonal characteristics and other tactics during critical times of interactions. Negotiation is a multifaceted art and difficult to predict final results during tactical processes. Buyer's decision to select product and service by the supplier is influenced by conflicting motives of end-users, deciders, and gatekeepers (Webster, 1993). Drumwright (1994) added inclusion of varied motives by critical and influential stakeholder's make decision-making processes a complicated procedure.

Ever-changing internal and external environments force buyers to transform behavior habits. Polonsky, Brooks, Henry, and Schweizer (1998) identified three different types of buyer behavior regarding change: (a) *policy entrepreneurs,* (b) *converts,* and (c) *resisters. Policy entrepreneurs* are individuals who expend extra effort to bring forward important issues within organizations. Such critical issue requires organizational behavior change to be adopted. Buyer introducing EPP can arguably be labeled as a *policy entrepreneur. Converts* support policy entrepreneurs after some resistance. *Resisters* are individuals that reject changes in behavior. Drumwright (1994) added that *policy entrepreneurs* are also resources that gather historical information on programs. A *policy entrepreneur* can be defined as a person who plays a pivotal role in turning ideas and issues into policies. *Policy entrepreneurs* do not have to be in purchasing, but can exist at any level in an organizational hierarchy. These individuals can effectively substantiate logic and reason for their ideas with persistence.

Buyer behavior can be linked to natural human behavior (Soloman, Surprenant, Czeppiel, & Gutman, 1985; Sutton, 2014). Michaels et al., (1987) and Wood (2008)

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pointed out buyers work in a dynamic profession with internal and external environments in an ever state of change. Buyers need to have at minimum, a working knowledge of assigned commodities and be able to use proper negotiating techniques that are appropriate for typical situations (Neslin & Greenhalgh, 1983; Zsidisin, Hartley, and Collins, 2013). Wolf (2005) stated such knowledge in areas of commodity expertise be greater than a standard working knowledge and operate at a level of proficiency.

Buyers know how to identify and work through various stages of negotiations to succeed for their organization (Tedeschi et al., 1973). Activities in purchasing are typically in conflict (Tedeschi et al., 1973), but end results should be based on ethical decisions (Robertson & Ross, 1995; Segal & Lehrer, 2013). Characteristics of a buyer are vast, and buyer behavior is situational, impacted by stakeholders and changes in environments. There is clearly no one model for buyers, for buyers react to stimuli based on the situation at hand.

Buyer-Seller Relations

A buyer is the organizational member that connects suppliers and other aspects of the external environment to their organization. Business-to-business purchasing and buyer-seller relations had significant studies over the past 50 years in areas of organizational buying behavior and buying process models (Johnston & Lewin, 1994; Robinson, Faris, & Wind, 1967; Sheth, 1973; Webster & Wind, 1972; Wang, Li, Ross, & Craighead (2013). Sheth (1996) identified three research tracks that have developed regarding works in buyer-seller relations: (a) buyer-seller relationships, (b) supplier commitment to enhance quality and customer satisfaction, and (c) use of information technology within supply-chain. The majority of buyer-seller negotiations are designed

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and conducted to allow for mutual gain. Such mutual gain does not have to be on each interaction, but both parties must benefit over the long-term. A professional understanding is both buyers and sellers are interested in a fair and rational conclusion based on facts and information exchange. Relationship objectives are intended to establish foundations for future business (Webster, 1979).

Braglia and Petroni (2000) and Gregory (1986) stated supplier selection may be the most critical phase in buying processes. Selection is based on known criteria, typically based on a combination of price, delivery, quality, and service. Wilson (1994) studies found quality is most desired followed by price and delivery. Studies by Verma and Pullman (1998) found that even though quality is the most important attribute, a buyer's final decision is based on price and delivery. Mummalaneni, Dubis, and Chao (1996) presented six frequently used criteria for supplier selection: (a) quality; (b) price goal; (c) promised delivery; (d) concern for customer; (e) long-term commitments; and (f) professionalism.

Supplier selection is typically based on simple, subjective, and other identifiable factors to rate criteria by weighted points (Braglia & Petroni, 2000). Even though results of these processes present an order of preference for suppliers, it often neglects other important factors. Often missed factors include (a) defining purchasing strategies that identify vendor characteristics, (b) what precisely is being purchased, and (c) which vendors should be dropped from approved lists. An approach that better focuses on a more extensive list of factors is based on the total cost of ownership (Degraeve et al., 2005).

Katsikeas, Paparoidamis, and Katsikea (2004) identified three areas for supplier selection shortcomings: (a) examination of supplier's performance, (b) inconsistent standards used to determine best supplier, and (c) understanding and weighing importance of supplier selection standards. Talluri and Narasimhan (2004) complemented Katsikeas et al., (2004) stating typical supplier selection criteria do not consider reasons for supplier poor performance in past evaluations. In addition, Pressey, Tzokas, and Winklhofer (2007) found there is no standardization to measure weak supplier relationships or successes of strategic purchasing initiatives recently implemented, but did find a large number of supplier sourcing models.

Starik and Rands (1995) stated supply and demand are difficult to predict whereas Hall and Vredenburg (2003) advised a significant challenge is to satisfy the full range and values of stakeholders. Supplier stakeholders demonstrate conflicting concerns representing areas of economics, social, and environmental concerns. These can create tension as organizations face internal and external influences (Dixon & Clifford, 2007). Azzone and Nucci (1998) informed being a supplier of environmental products and services is a dynamic, demanding, yet exciting industry.

Cason and Friedman (2002) and McMillan and Morgan (1988) believed buyers usually revisit established, trusted suppliers when looking to make a return or new purchases. From past purchases, buyers feel enabled to predict suppliers' pricing formula, and such a pricing formula in the recent past has also been successful from supplier's viewpoint. Buyers typically repeat a purchase for same goods or services from same suppliers when prices remain similar. This behavior is practiced by buyers as to incur no supplementary costs associated with searching competitors. Higher costs add to overall

bottom line and will raise a red flag to other decision makers in the organization. Sellers conversely understand this buyer behavior and refrain from incremental price changes that may bring unwanted attention to business transactions. A buyer who revisits believes relationships are one of loyalty, dependability, and confidence. Purchasing managers look to protect such relationships as a reliable source equivalent to marketing protecting a reliable customer (Janda & Seshadri, 2001).

Watts, Kim, and Hahn (1995) categorized traditional buyer-seller relations as a distant-independent relationship. They are viewed as adversaries competing for a greater share of negotiated objectives rather than advocates looking to satisfy strategic objectives for both organizations. Adversarial relationships are built on establishing power stances in an effort to achieve a greater position for party negotiation strategies. Adversarial relationships also tend to be short-term, focusing on current prices and quality and not long-term pricing and quality capabilities. Both buyer and seller understand that an adversarial affiliation is short term oriented and does not fit into strategic agreements. A primary objective of buyer adversarial approach to supplier relations is to reduce prices of goods and services as much as possible (Mohan & Deshmukh, (2013). Shapiro (1986) stated for this approach to succeed, three major situations exist: (a) purchasable commodity are competitive for price, quality, and service; (b) buyer allocates contracts among multiple competitors to retain their interest; and (c) buyer negotiates short-term contracts to enhance a competitive environment.

Humphreys, Shiu, and Chan (2001) and Goh, Lau, and Neo (1999) supported an opposite view of buyer-seller relationships based on a cooperative position that focuses on sharing information, This behavior benefits long-term relationships between buying

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and selling organizations. Such a relationship does not focus on power positions but concentrates on long-term activities to benefit both organizations. This different approach welcomes a partnership-type relationship helping each other to minimize costs, improve quality and delivery, and establish a flexible and reliable business arraignment. Logic behind this concept state well-managed organizations are consistently monitoring internal and external environments to predict future situations (Watts et al., 1995). Wolf (2005) found senior management in purchasing do not stay in their positions for more than a few years, thus hindering abilities personally to establish credible long-term relationships without cooperation and ownership from organizational commodity buyer.

Cooperative relationships succeed when they are based on trust, commitment, and long-term contracts (Humphreys et al., 2001). Ellram (1990) listed four factors that determine a cooperative relationship: (a) financial concern; (b) strategy centered on organizational culture; (c) technology requirements; and (d) other critical factors. Other factors include intangibles such as senior management commitment, trust, flexibility, teamwork, and patience. Tangible factors are reduced costs, adopting total quality management, low rejection rate, on-time payment, joint research and development, electronic data exchange, on-time deliveries, and lower stock levels. Janda and Seshadri's (2001) studies found cooperative negotiations and dealing with minimal suppliers are keys to efficiency whereas collaborative interactions designed to maintain long-term relationships are keys to effectiveness. Efficiency increases as procurement costs decline, and effectiveness improves through enhanced service, improved quality, ability to control prices and confident social relations with suppliers.

Even though Axelsonn and Wynstra (2002) and Lingreen and Wynstra (2005) agreed on two different approaches to buyer-seller relations, other studies complement these two approaches. Adversarial approaches are competitive and designed for sellers to compete in order to drive process costs down whereas cooperative approaches are collaborative to focus on partnerships to assure a standardized outcome (Carr & Smeltzer, 1999b; Gibbs, 1998; Parker & Hartley, 1997; Smart & Harrison, 1993). Dwyer, Schurr, and Oh (1978) advised buyer-seller relations exist between both adversarial and competitive spectrums. Position is based on depth of purchasing department structure and strengths of a relationship based upon environmental factors at a point in time. Environmental factors include viable competition in markets as well as intentions and buyer position intensity. With purchasing activities being dynamic and situational, traditional tactic of using supplier competition as foundations for buyer-seller relationships remain most common.

Buying culture influenced by leadership, industry, or organizational politics can take many forms. There can be degrees of intensity within a purchasing style. Drumwright (1994) categorized social responsibility buying organizations into four broad groups: (a) *founder's ideals*; (b) *symbolism*; (c) *opportune*; and (d) *restrains*. A *founder's ideals* organization sees their organization as a leader in social change and invests in experimentation. This type of organization has a social responsibility mission statement, a social responsibility executive and provides audits for compliant vendors and self. A *symbolism* organization finds social responsibility efforts to be complex and not easily communicated to and accepted by stakeholders. Organizations' executive level

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understands participation in social responsibility activities has a direct link to survival due to public or government influence.

An organization that uses social responsibility as a cost savings or competitive advantage is labeled as *opportune*. This type of organization reacts quickly to social responsible products and services that address immediate customer needs. The final type of organization is *restrains*. This organization may have tested similar grounds of the other three categories, but voluntarily decides to limit participation. Polonsky et al. (1998) added that these four categories can be placed into two broad groups: (a) organizations that have a proactive strategy to participate in social responsibility activities (*founder's ideals* and *symbolism*) and (b) those that have a reactive strategy (*opportune* and *restrains*). These different groups are identified by initial and reason for behavior. The first group incorporates social responsibility activities behavior as a natural part of organization's missions and while the second group reacts towards cost-profit.

Maloni and Benton (2000) found strong supplier relations built on long-term agreements had a positive impact on supplier performance. A buyer's long-term objective in strategic sourcing and supplier development is their ability to reduce costs and increase efficiency without sacrificing quality or delivery time of goods and services. This agreement will be utilized over several years if not decades. Japan demonstrated that supplier development through customer investment is a successful technique to improve efficiency and install competition in a supply chain. Green Isle Foods, a subsidy of Northern Foods in Ireland, based its purchasing strategy on six key standard principles: (a) buy locally if competitive; (b) establish long-term relationships; (c) share information and technical expertise; (d) limit strategic suppliers to two per competitive commodity;

(e) have supplier commit to higher quality standards; and (f) enable customer to measure benefit per cost (Ryder & Fearne, 2003). Long-term relationship objectives for Green Isle Foods have stabilized one aspect of their external environment allowing valuable internal resources to be used in other areas within their organization.

Buyers who are responsible for obtaining goods and services for organizational operations require knowledge to research reliable suppliers and establish supplier relations. Such a process is complicated and time-consuming. Leonidou's (2005) study concluded buyers use various techniques to influence suppliers throughout processes. Buyer's most common strategy was the use of *referent* and *expert* power. Jones and George (2008) categorized *referent* and *expert* power as personal characteristics. Findings also suggested buyers will stop short of risking future business, signifying that a supplier has some level of importance and may play a role in future purchases. Leonidou (2005) reminded not all business dealings meet with satisfaction on both sides. When buyer-supplier relations become irreconcilable and damaging, buyers will take legal action to correct any wrongdoing. Developing buyer-seller relations both present and future is a critical responsibility for organizational roles of buyers. A buyer's value to an organization is weighed on their ability to succeed in this dynamic arena.

Fawcett, Magnan, and Carter (2008) provided a guide to measure an organization's supply chain management and places measurable criteria into three categories: (a) *benefits*, (b) *barriers,* and (c) *bridges* (see Table 1).

Table 1.

Benefits, Barriers, and Bridges to Effective Supply Chain Management

Category	Measurable criterion
Benefits	Respond to customer requests
	On-time delivery
	Customer satisfaction
	Order fulfillment lead time
	Cost of purchased items
	Firm profitability
	Handle unexpected challenges
	Inventory costs
	Overall product costs
	Productivity
	Overall product quality
	Transportation costs
	Market penetration
	Product innovation lead times
	Cost of new product development

Table 1. Continued

Category	Measurable criterion
Barriers	Inadequate information systems
	Lack clear alliance guidelines
	Inconsistent operating goals
	Lack shared risks and rewards
	Processes poorly costed
	Nonaligned measures
	Lack willingness to share information
	Organizational boundaries
	Measuring supply chain (SC) contribution
	Measuring customer demands
	Lack employee empowerment
	Lack resources for supply chain management (SCM)
	Frequent communication
Bridges	A willingness to share information
	Use of cross-functional teams
	Shared expertise w/suppliers
	Common goals
	Supply base reduction

Table 1. Continued

Category	Measurable criterion
Bridges	Senior management interaction
	Cross-functional processes
	Shared expertise w/customers
	Customer selectivity
	Increase supply chain training
	Use of supply chain measures
	Use of consistent measures
	EDI linkages
	Clear selection guidelines
	Vendor managed inventories
	Use of total cost analysis
	Sharing risks and rewards
	Shared mission statement
	Clear alliance management guidelines

Benefits are labeled as activities that improve organizations' position to become

more efficient in purchasing processes. *Barriers* are areas that hinder efficiency, and

bridges are areas that need attention from management. Management actively analyzes,

researches, and develops solutions to close *bridge* gaps. Such measurements can effectively be used in EPP supply chain activities. Fawcett et al., (2008) survey of middle and senior management from members of Institute of Supply Chain Management (ISM), Council of Supply Chain Management Professionals (CSCMP), and Association for Operations Management (APICS) list results in order of importance shown in Table 1. Such measures are critical to management in knowing what suppliers are worthy of their time and energy.

Purchasing Process

Purchasing can be undervalued in its contribution to organizations as a result of basic management techniques such as insufficient planning, weak or vague communication, and misleading performance measures of processes and systems (Degraeve et al., 2005; Wolf, 2005). Kauffmann (2002) and Porter (1990) acknowledged purchasing is considered an important factor in organizations. They are responsible for providing goods and services for other organizational units by managing and maintaining a complex process in conjunction with input from various stakeholders to achieve organizational mission. Purchasing processes begin with an identified need of a good or service by an organizational department end-user. In a formalized-centralized structure department, end-users next formally communicate need to their purchasing department with a document that clearly states all required information. To efficiently expedite purchase and identify accountability, required information typically includes requestor's (end-user) name, requestor's department, organizational financial account number for intra-organizational cost budgeting, product or service specifications, departmental fiduciary approval name, and need-by date. An official document form at this stage is

commonly known as a *purchase requisition*. Signature of departmental fiduciary approval name informs Purchasing this request has been verified, approved to acquire, and funds are available to purchase.

Completed requisitions are forwarded to assigned commodity purchasing buyer for action. When buyers are attempting to convert purchase requests to *green*, clarity of specifications listed on provided requisition is very critical. If the request is not a specific item from a particular supplier, buyers have an opportunity to discuss with requestor alternatives that may satisfy same need. Success to a *green* alternative is dependent upon commodity knowledge of assigned buyer along a comprehensive understanding of *green* substitutes and professional relationships between buyer and department user (do Paco & Raposo, 2009). Unless dictated by administrative policies, buyers are allowed to discuss *green* substitutes that satisfy the same need, be of reasonable costs, quality, and foremost explain environmental advantages. Unless purchasing buyer has support from executive leadership through policy or stated objectives, buyers usually yield to requestor final decision (Michaels et al., 1987).

Adding to the bottom line of *green* purchasing costs is an additional effort that buyers and organizations must formally absorb (if any) into purchasing processes. Expected costs to affect overall internal process are costs to research, evaluate, develop, support, and actively use and maintain a *green* policy (Drumwright, 1994). Coggburn (2004) indicated such process activities are streamlined to reduce the use of organizational resources in an effort to lower costs. Streamlining should not be in exchange for proper evaluation along with product and supplier acceptance. Ideas to adopt an environmentally friendly product can include (a) a joint development for

product standards; (b) use of eco-labels and other formally recognized identification; and (c) use of standards, policies, and procedures developed by formal institutions. In addition to supplier negotiations, considerations are established to determine value of good or service and methods of compensation. Only after departmental end-user accepts discussed product or service and contractual agreement language can buyer issue a purchase order to agreed preferred supplier for acceptance, rejection, or modification to terms and agreement.

To understand if processes are achieving desired goals, vital stages of purchasing processes are measured to clear, reasonable, and accepted standards (Camp, 1998). Process models require measurements taken after negotiation steps have started. Bartos (1974) warned purchasing process models are complex, dependent upon input and interpretation of measurements. Typical buyer-seller negotiations can generate several possible outcomes. Human factors along with situational factors must allow for fluctuations within any model.

Camp (1998) defined *benchmarking* as "the search for industry best practices that lead to superior performance." In relating to purchasing, *benchmarking* can be described as formal processes of gathering and analyzing information on purchasing process and performances of other organizations (competitive or non-competitive) in order to improve organizations own purchasing process and performance (Sanchez-Rodriguez, Martínez-Lorente, & Clavel, 2003). Even though *benchmarking* has become popular in organizational practice, Sanchez-Rodriguez et al. (2003) found very few studies have been conducted concerning *benchmarking* purchasing functions. Several outcomes for

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purchasing activities question quality and meaning of measurements within purchasing processes (Bartos, 1974).

Carr and Smeltzer (1999a) concurred from a study of 739 organizations that organizations failed to link a formal procedure designed for operational efficiency and control to benchmarked activities. Also, measures neglected critical information from suppliers to justify benchmarks. Benchmark criteria were created solely from internal numbers. Several studies have been conducted in an effort to solidify relationships between *benchmarking*, purchasing performance, and organizational performance (Anderson, Fagerhaug, Randmael, Schuldmaier, & Prenninger, 1999; Carr & Smeltzer, 1999a; Forker & Mendez, 2001; Gilmore, 1999; Landeghem & Persoons, 2001; Voss, Ahistrom, & Blackmon, 1997) with no agreeable conclusion on measurement relationships. Some studies demonstrated a positive relationship between *benchmarking* in purchasing, strategic purchasing, and organizational performance. Other studies showed that *benchmarking* improves organizational performance only when organizations look to improve through best practices, set challenging performance goals, and execute decisions based on current findings. However, other studies resulted in an adverse effect on organizational performance.

Unless *benchmarking* is adjusted to regular changes influenced by internal and external environments, it is not known if the process is truly effective. An analysis of internal and external environments is performed periodically to monitor process and position to goals and objectives. At the conclusion of organizational analyzes, individual departments such as Purchasing are held to similar monitoring procedures to confirm alignment to organizational goals and check for limitations. A popular model used to

perform such an analysis is known as a *SWOT analysis*. A *SWOT analysis* examines

internal strengths (S) and weakness (W) while incorporating external influences of

opportunities (O) and threats (T) (Sherman, Rowley, & Armandi, 2007). Watts et al.,

(1995) stated such an analysis provides organizations and departments with informed

direction to achieve and align goals and objectives. With their connection to the external

environment, Purchasing often plays a significant role in implementing results of a *SWOT*

analysis to position organization on a path to realizing targets.

Process-wise, Parikh and Joshi (2005) distributed an essential purchasing

dimension into two broad categories with each category requiring specialties in buyer

qualifications: large dollar-value purchases versus small dollar-value purchases. Large

purchases are classified by purchases with a high quantity of items purchased, high cost,

more frequently purchased, more detailed, critical for operations or required use for

organizational behavior. Small purchases can be classified as purchases of low quantity,

lower costs, infrequently purchased, standard items available from multiple suppliers,

low technology, or unexpected ordering. These two broad categories of large and small

purchases have been identified to have seven distinct characteristics: (a) volume; (b)

specificity; (c) technology complexity; (d) essentiality; (e) fragility; (f) variability; and

(g) economic value (Croom, 2001; Gonzalez-Benito, 2002).

Regardless of purchasing structure, Parikh and Joshi (2005) stated that both large

and small purchases are handled through similar standardized purchasing processes.

Croom (2001) advised that most organizations frequently design their purchasing

processes for large purchases, making small purchases inefficient. Some organizations

have used petty cash for small purchases, but lack of controls and misuse has encouraged

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development and use of other purchasing mechanisms. It is vital that organizations

develop effective systems to handle large and small purchases individually to maintain

controls and minimize processing costs.

Gamble (2004), Palmer, Gupta, and Davila (2003), and Roy (2003) informed that

many organizations have implemented use of a purchasing (credit) card as a separate

vehicle to handle small purchases. The Tennessee Valley Authority (Verdin, 1999), Eli

Lily (Francis, Fitz, & Schafer, 1999), U.S. Army (Sullivan, 1999), and various U.S.

government agencies (Kuykendall, 2001) have successfully employed use of purchasing

cards for departmental purchases, relocation, and purchases of low-cost goods and

services. No studies have been found linking purchasing card use to an established EPP

program.

Parikh and Joshi (2005) argued organizations prefer purchase orders as their

primary purchasing vehicle because of abilities to provide stronger controls and reduce

internal and external fraud. With control features, high costs to support a purchase orders

based system occur. High-cost processes are usually not sensible for low-cost purchases.

A study by Palmer (2000) finds that average costs of overhead for a purchase order is

$91, with Vetras's (1999) studies suggest a range of $75 to $150. Martinson (2002) stated

processing cost ratio between the purchase order to purchase card is 5 to 1. Use of a

purchasing card as a separate system is more cost-effective for small dollar-value

purchases.

When a purchasing structure is designed and implemented, purchasing processes

can consist of many processes per purchasing criteria (Palmer, 2000). Regardless of

processes, there are accountability and measures to meet appropriate standards to protect

the organization. To achieve a level of confidence, processes are measured to sound and reliable standards (Camp, 1998). Purchasing processes are designed for efficiency modifications, but not at the expense of minimizing critical controls, conflicting with sound policy, or satisfying stakeholder opinions.

Green Product Information

A purchasing structure, supportive leadership, and trained buyers are desired to support an EPP agenda, but an obstacle to a preferred design are combinations of lack of studies and acknowledged infancy of the *green* movement. Purchasing structure design is based on both a culture that demands action, efficiency, and effectiveness, and products and services that qualify as traditional substitutes. Banerjee, Gulas, and Iyer (1995) stated early *green* publications were created to demonstrate corporate image, not any benefits of a particular product. Additional focus was on environmental behavior and emotions of fear and guilt that were mainly used to induce sales. Understanding marketing techniques adds to a buyer's ability to eliminate noise from discussions, negotiations, and ability to concentrate on important facts critical to meeting product or service procurement objectives. Foxall (1999) added initial objectives of marketing *green* products were to convince buyers that such products are effective substitutes for traditional products. This exchange can only be accepted when functional similarities exist within a product category. Behavior analysis also predicts buyers are influenced by environmental events rather than intentional activities. This behavior suggests buyers are influenced by internal and external environments, not necessarily by historical patterns. Upon final agreement to purchase one product over another, buyers require feedback to gather valuable information for future buys and formulate historical data. A major purpose of a buyer's

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monitoring after purchase activities is to reinforce order logic and solidify purchasing decision (Stump & Heide, 1996).

Professional buyers understand introductions of any new product require additional costs occurred by invention activities, development, testing, and maturing to acceptable qualities and standards. Prices of *green* products are usually higher to allow manufacturers to absorb some of these costs (Meyer, Tertzakian, & Utterback, 1997). Green and Smith (2002) warned of counterfeit products entering into a prime market when it is believed quick sales can be made before being properly identified. Imitation products are usually introduced after buyers have tested and trusted primary products from reliable suppliers. Product confidence open doors for substitute products that are both legitimate and illegitimate.

Kilbourne (1995) explained that *green* advertising is more complex by having two identifiable dimensions: political (laws, regulations, and government recommendations and guidelines) and human (grass roots organizers, activists, and individuals with an interest). Kilbourne also argued that there are five differing *green* advertising approaches that increase in green intensity:

1. Environmentalism. Advocacy towards protecting natural environments.

2. Conservationism. Sustaining for future generations.

3. Human welfare ecology. Degrading physical and social environments.

4. Preservationism. Defend regardless of human use.

5. Ecologism. All-encompassing views of nature.

Buyers are subjected to *green* advertisements that meet one or more criteria: (a) explicitly or implicitly connects products and services to the biophysical environment; (b)

advocates a *green* lifestyle; and (c) presents an environmentally friendly corporate image. Buyers understand marketing objectives of advertisements from selling organizations. Banerjee et al., (1995) developed a framework of five categories to analyze *green* ads exposed to buyers: (a) characteristics; (b) *greenness*; (c) objective; (d) appeal; and (e) issues. Each category presents a different perspective on a desired message and buyers should be able to identify seller's intent.

Marketing techniques are varied and complex based on depth or meaning of intended message. Banerjee et al., (1995) informed ad characteristics contain three variables: (a) type of advertisers (such as manufacturer, retailer, or not-for-profit), (b) products or services, and (c) and styles of graphic design. Ad *greenness* is represented by degrees of *green* message and falls into one of three categories: (a) shallow (superficial wording with no specifics), (b) moderate (specific issues are mentioned such as recyclable), and (c) deep (entire focus is on environmental issues). Ad objective falls into one of four categories: (a) promotion of *green* product; (b) promotion of company; (c) induce customer behavior; and (d) acknowledges company membership in an environmental association or a donation to an environmental cause. Ad appeal has seven categories: (a) zeitgeist, reflecting best of current period; (b) emotions, taking into consideration guilt, fear, humor, warmth, and self-esteem; (c) rational, considering environmental impact; (d) organic, highlighting natural interests; (e) corporate *greenness*, demonstrating social responsibility; (f) testimonial, in which field experts, celebrities, or ordinary people endorse product or service; and (g) comparative benefit, in which benefits are directly or indirectly compared to alternatives. Malmelin (2010) believed

advertising professionals are interested in social themes that are central to client's company strategies.

Buyers acquire information from various sources in order to make decisions for organizations. Sources at early stages of a product life-cycle may not be deemed as reliable. Informational research conducted is used to compare supplier information to independent interpretations, thus providing a level of authenticity in source content. Supplier information is naturally biased to appeal to buyer's needs and expectations, but not all advertisements and supplier information is truthful (Bennett, 1997). Inconsistency in the environmentally friendly industry makes it difficult for a buyer to be confident in supplier selection and product certainty. *Green* information supplied to buyers requires a higher degree of scrutiny to increase confidence level. Coulson-Thomas (2010) added consumers need to be knowledgeable when making purchasing decisions on products that affect climate change. Suppliers of such products have responsibilities to build confidence among consumers by educating potential users on environmental impacts of their goods.

Introducing *green* products within an organization may require detailed, and costly product testing before a purchase is made. Quality of a product or services is a critical factor for end-user satisfaction. It is the responsibility of buyers to obtain and relate specifications and expectations from organizational end-user to proposed supplier before commitments are solidified. All quality inspections performed within buying organizations or by suppliers consume resources so inspections should be minimal to reduce cost, but not at the expense of appropriately determining product quality (Tannock, 1995). If a product is or is not inspected at vendor's site, another question

develops if inspection should also be done at customer's site. The need for inspection costs is dependent on product risk to the organization (Freiesleben & Ringier, 2006).

Ellram (1995) explained total cost of ownership approach takes into consideration resources used in performing all purchasing related activities and measures total cost-benefit relationship with suppliers. Total cost reflects the cost of doing business and delivery costs, both direct and indirect. Examples include cost to place an order, product quality, customer service, and appropriate discounts. Degraeve et al., (2005) presents a total cost of ownership matrix that provides a framework for quality essential elements required for supplier evaluations. A matrix analyses consists of several activity costs: (a) acquisition; (b) reception; (c) possession; (d) utilization; and (e) elimination. When activity costs are identifiable with measurable criteria, suppliers' lowest cost may not be customers' lowest total costs.

Purchasing Mission Statement

To proclaim direction, goals, and values, many university purchasing departments create and display mission statements for stakeholders. David and David (2003) provided a simple explanation of a mission statement: to inform purpose of existence. Mission statements are notably found at organizational highest level and can be developed for internal units for the same reason. A purchasing department mission is to acquire right quantities, right items and services, at right prices and delivered at right times (Tracey & Tan, 2001). Watts et al., (1995) explained that *right* is situational based on internal and external influences at a point in time.

Defining a mission statement for a purchasing department is dependent upon professional discipline and department value in the organization. A weak general mission

statement reflects a department whose activities are more clerical than professional. A detailed mission statement reflecting discipline practices suggests a department that is active in organizational strategies and a respected asset to organizational mission. David and David (2003) explained mission statements are concise, understandable, and kept within a few sentences. Organizations will typically craft mission statements to differentiate themselves from others, promoting strengths and strategies.

Strategic Planning for Purchasing Activities

All organizational mission statements including departmental statements such as purchasing should be in line with corporate strategies. Corporate strategies relating to business methods typically involve input from practicing departments including purchasing. When corporate strategies are developed with Purchasing's honest and frank input, Purchasing should respond with their strategies to support corporate strategies (Rajagopal & Bernard, 1993). It becomes a buyer's responsibility to develop and cultivate suppliers to confirm their qualifications to support organizational goals. Narasimhan and Carter (1998) stated that purchasing departments must be involved in the development of organizational strategies to link desired goods and services to plans. Traditional purchasing approaches are based on the number of suppliers, pricing, and concentration of authority based on current or near future activities. Many purchasing managers and organizational leaders believe this remains a focus of a purchasing department.

Watts et al., (1995) reminded an agreed definition of strategy refers to decision-making patterns of an organization that (a) creates and communicates goals and objectives, (b) produces plans to achieve goals and objectives, and (c) anticipates

stakeholder behavior to goals and objectives. Strategy presents relationships to economic

and noneconomic entities. Purchasing strategies are considered to be acquisitions of

goods and services to support organizational activities complimenting goals and

objectives. Department and unit strategies are aligned with corporate strategies to be

effective and a contributing unit for organizations (Squire, Cousins, Lawson, & Brown,

2009). Zhu et al., (2010) stated strategic planning for *green* purchasing are more complex

due to variables and inconsistencies. Managerial activities to support *green* initiative

strategic plans include leadership, purchasing, and environmental managers in order to

identify all possible relationships and opportunities.

Foerstl et al., (2013) agreed with Reck and Long (1988) four-stage model to link

purchasing strategies with corporate strategies. Four stages are *passive, independent,*

supportive, and *integrative.* A purchasing department in Stage 1 has no strategic direction

as an operational unit and reacts to requests from other organizational functions. This

stage is *passive*, primarily inactive and more clerical than professional (Person &

Gritzmacher, 1990). Stage 2 is *independent* where Purchasing adopts and practices latest

techniques, but there is no link between organizational strategies and purchasing

strategies. Activities include cost reduction, process improvement, staff development, and

contributions to profitability. A purchasing department is in a *supportive* mode in Stage 3

when adopted purchasing techniques are aligned with organizational strengths. Buyers

are included in initial managerial meetings, suppliers are developed, external

environment is constantly monitored, and buyers are respected because of their

knowledge, experience, motivation and attitude. A purchasing unit in Stage 4 is

integrated with organizations competitive strategy and is considered an essential part of

organizational success. In this stage, formal lines of communication are established between influential units. Executive levels are formally informed on purchasing contributions, personal development focuses on organizational strategies, and organizational contributions are measured and monitored.

Freeman and Cavinato (1990) presented a different four-phase model linking purchasing to organizational strategies. Offered in Phase 1 is *financial planning*, Phase 2 is *forecast-based planning*, Phase 3 involves *externally oriented planning*, and Phase 4 is *strategic management*. Phase 1 *(financial planning)* connects cost of operations to the budgeting process. All strategic plans are budgeted to weigh the cost of decisions. Purchasing activities are a critical factor in determining organizational costs (Stump & Heide, 1996). Additional *green* purchasing activities may negatively affect organizational costs (Meyer, Tertzakian, & Utterback, 1997). Phase 2 *(forecast-based planning)* involves models to predict future actions from historical events. An observant organization understands and operates within predictable internal and external environments (Koehler, 1991). The nature of internal and external environments of purchasing is predictable within given typical economic or technological fluctuations. Successes and failures of past events should help decision-makers plan for future activities. Industries in their infancy such as *green* purchasing provide minimal, inconsistent, and questionable history (Gupta & Ogden, 2009). Phase 3 *(externally oriented planning)* arises when companies miss opportunities due to lack of future thinking. Xideas and Moschuris (1998) informed purchasing departments are a major source of organizational information and become a critical factor to prepare for current and future opportunities. Phase 4 *(strategic management)* combines strategic planning

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process with operational decision-making. Watts et al., (1995) argued both Reck and Long (1988) and Freeman and Cavinato (1990) models fail to connect the importance of purchasing with supplier relations and other functional areas in organizations. Such relationships are critical in linking purchasing activities and suppliers with organizational strategic planning.

Developing strategic plans for purchasing is no different from developing strategic plans for any other organizational unit. Strategic plans for an operational unit requires executive guidance and confirms contributions to organizational goals. Executive guidance in strategic plans also includes reviewing proposed departmental activities that reflect the authority and power granted to them by leadership. As organizations move to position itself for future opportunities, abilities to acquire desired goods and services plays a critical role in a successful transition. Each unit within an organization is in harmony vertically to corporate strategies and horizontally for operational efficiency. Garzella and Fiorentino (2014) and Hart (1995) acknowledged effective strategic planning requires input and support from all stakeholders. As a result, a successful strategic plan for purchasing is never conducted in isolation.

Kiser (1976) provided six purchasing strategies designed to increase purchasing performance objectives: (a) negotiation; (b) sourcing; (c) developing and maintaining good supplier relations; (d) developing suppliers; (e) protecting organizational cost structure; and (f) minimizing costs. A study from Janda and Seshadri (2001) focused on four strategies: (a) cooperative negotiation; (b) collaborative interaction; (c) supplier base; and (d) temporary relationships. Focus on strategies helps minimize risk, improve efficiencies and align actions to organizational goals.

Environment Outreach

Reed and Swain (1997) provided a general definition of professional purchasing as the physical and mental abilities of a person or organization to appropriate highest quality good or service possible for a logical lowest cost. Specifically, Samaniego, Arranz, and Cabezudo (2006) provided details explaining purchasing processes are made up of six stages: (a) recognition of need (end-user determines a good or service is necessary for organizations to achieve objectives); (b) deriving technical specifications (physical and objective characteristics of desired goods or services); (c) supplier search (researching and identifying suppliers that may be capable of satisfying needs); (d) evaluate alternatives (different suppliers may present similar products, or other suppliers may be able to satisfy needs from various technical specifications); (e) evaluate alternatives (test and rate supplier submissions for objective satisfaction); and (f) decide on alternative and negotiate terms for payment, quality, delivery, and expectations. *Green* purchasing can be determined to be the inclusion of all activities that are of an environmental concern into purchasing processes. Needs, specifications, suppliers, final products or services, and terms can be satisfied by one or multiple stages in Samaniego et al. (2006) rationalization.

Purchasing processes are complex, beginning with an organizational need and ending with a receipt and acceptance from requesting end-user (Erdmenger, 2003). Coggburn (2004) questioned if *green* purchasing can succeed with traditional purchasing management values of efficiency, effectiveness, and economy. Drumwright (1994) agreed with Coggburn (2004) and explained *green* purchasing exercises are more complex than traditional purchasing exercises due to latest influences from executives,

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environmentalist, and influential stakeholders supporting differing sides of the purchasing argument. Regardless of product or service, purchasing processes are effective and efficient to meet objectives from diverse stakeholders. Coggburn (2004) clarified efficiency is understood to be a refinement of activities to receive greater output per resource input and effectiveness being abilities to achieve desired goal.

Murray (2001) stated *green* purchasing has many positive unexpected results regarding both environmental and non-environmental issues. An expected gain is the theoretical contribution to prolonging earthly valued resources for future generations. Non-environmental unexpected issues are creations of ideas, new organizations, and direct and indirect jobs to support a new paradigm. Environmental concerns also opened up a new concept called *fair trade* in which workers in underdeveloped countries received a fair wage for their efforts to produce products. *Fair trade* has been defined by the European Fair Trade Association (EFTA) as monitoring and guidance of wages for works at lower ends of product scales, resulting in an increase in pay to workers (Dey, 2007).

A factor for economic expansion shows *green* purchasing creates new markets for entrepreneurs (Vik & Farstad, 2009). Direct results are new customers for various products and services due to entrepreneurship and creativity. Sectors of the economy benefiting from the progress include transportation, reuse of materials (recycling), distribution, and waste (Sadiq & Khan, 2006). With market expansion, job development and growth naturally follows. Crowley (1999) added efforts in corporate environmental advancement evolve through developmental stages, vary in levels, based on activities and

drive as organizational programs seek to mature. Crowley categorized environmental criteria for jobs into three shades of *green*: deep, mid, and light (see Table 2).

Even though an organization's human resources department has responsibilities to draft job descriptions, efforts in human resources do not indicate or suggest an organization's environmental commitment. Organizations at a macro-level (e.g. department or particular job) involved in environmental development can use Crowley's (1999) table (see Table 2) as a measurement to weigh the status of progress towards environmental commitment.

Table 2.

Green Employment Typology

	Green		
	Deep	Mid	Light
Mode	Proactive	Integrative	Reactive
Scope	Long-term	Intermediate-term	Short-term
Nature	Transforming	Reforming	Conforming
Objective	Redefine growth	Ecologies growth	Enhance growth
Operation	Rejectionist	Reinventionist	Accommodationist
Aim	Ecological sustainability	Ecological modernity	Sustainable development
Jobs	Preserving nature	Greening industry	Remedying ecological

Green Marketing

With birth and growth of a new market comes marketing techniques to help connect company's products and services with potential buyers. Peattie and Charter (1997) developed a definition of *green marketing* that has been commonly accepted: "the holistic management process responsible for identifying, anticipating, and satisfying the needs of customers and society, in a profitable and sustainable way." Rivera-Camino (2007) acknowledged stakeholder roles heavily influence organizations and related markets but recognized relationships between targeted stakeholder and *green* marketing strategies for a marketing approach have not been adequately examined. Shrum, McCarty, and Lowery (1995) added there has not been much scholarly contribution to activities related to *green* purchasing behavior, marketing, and communications. *Green* literature generated from businesses suggest companies are fully capable of converting products and services over to ones that are more environmentally friendly, but in actuality only a few reasonably comply (Newton & Harte, 1996). Shrum et al., (1995) added it is an expected marketing ploy for businesses to exploit social concerns for a *greener* environment in advertising to attract new customers. Studies from an *Advertising Age* poll suggested customers were confused and distrusted environmental claims from *green* marketing allegations. The study also indicated that more than 50% of the polled felt advertisements were in excess, creating less consumer attention and doubting statements (Chase & Smith, 1992).

A marketing objective to promote a friendly environmental image informs stakeholders that the company is a leader in the *green* industry (Schmidheiny, 1992). Early *green* marketing focused more on corporate image as opposed to products and

services (Iyer & Banerjee, 1993). Buysse and Verbeke (2002) stated not all corporations involved in *green* markets are equal in advertisement and communication techniques. An organization's commitment to *green* strategies is critical to the type of communication techniques utilized along with quality and quantity communication messages. Focusing on organizations and not its products adds credibility to Chase and Smith's (1992) finding of product confusion and distrusting statements. Customers are interested first in compliance with products objective before corporate image (Shrum et al., 1995).

Rao (2003) classified environmental outbound logistics as activities towards *green* marketing, environmentally friendly packaging, and environmentally friendly distribution. Bowen, Cousins, Lamming, and Faruk (2001) provided seven points to aid in outbound logistics: (a) environmentally friendly waste management system; (b) environmentally approved packaging; (c) suppliers taking back packaging for reuse; (d) eco-labeling; (e) identifying and recovering products at the end of their usefulness; (f) informing customers of environmental programs; and (g) use of environmentally friendly transportation. Reverse logistics involves cooperation of all suppliers, contractors, distributors, transporters, and end-users working together to reduce or eliminate activities that hurts the environment (Bowen et al., 2001). Hines and Johns (2001) suggested cooperative involvement encourages sharing of ideas as being a proactive approach to internal and external environmental practices, and builds teamwork between the main stakeholders.

Green marketing should not be only product and service focused, but should educate stakeholders on direct and indirect contributions to the environment (Shrum et al., 1995). D'Sousa, Taghian, Lamb, and Peretiatkos (2006) stated *green* marketing

designers question objectives of buyers for environmentally friendly products and services. Besides environmental features, marketers look to see what other factors impact buying decisions. Marketing techniques alone does not provide adequate information for a buyer to make a confident selection. Sheth (1996) pointed out buyer-supplier relations are critical to improve product quality and customer satisfaction. Buyers use known relations and other dependable resources to verify marketing claims (Chase & Smith, 1992).

Influence of Government

A key stakeholder to influence developer and buyer behavior is government involvement. Governments at various levels play key roles in shaping corporate environmental strategies. Society has abilities to influence managerial decisions as consumers, as activists, and as registered voters. Consumers indirectly inform suppliers of their needs and desires through purchasing habits. Deri (2003) indicated activists influence consumers, corporations, and governments to change, reward or punish organizational behavior through various types of behavior. Influential activities derive from communication, picketing, crusades, and political contributions. Government officials wanting to stay in office carefully balance viewpoints of corporations, voters, activists, and the economy through their powers and influence in environmental regulations (Palmer, Oates, & Porter, 1995). In an effort to improve *green* initiatives, The White House Task Force on Recycling in 2001 identified common assumptions normally identified with *green* purchasing: (a) inferior products, (b) more costly, and (c) not available (Coggburn, 2004). Erdmenger and Fuhr (2001) pointed out the United Nations has embraced programs designed to improve environmental activities of governments

through markets and procurement. These global initiatives have influenced policies and regulations in the public sector in an effort to conform to internationally accepted practices to develop ecological behavior.

Governments influence environmental behavior through laws, regulations, recommendations, and practice. Steadman, Albright, and Dunn (1996) added in some situations governments must be contacted for approval or clarification before a project begins its life-cycle. Chan and Lau (2000) felt the U.S. government has waited too long in acknowledging public opinion and environmental concerns with regulation, recommendations, or guides. From their studies in China, Chan and Lau stated government support plays a significant role in enhancing *green* marketing among the business sector. Menon and Menon (1997) believed organizations are getting involved in environmental products and services as business opportunities, not a reaction from governmental policies and regulations.

Noci (1997) suggested *green* purchasing initiatives, projects, policies, and procedures implemented in the public sector should be attempted and evaluated in the private sector. In trying to be a role model, government has experiences that can be capitalized on by the private sector. Cox (1997) supported challenges for the private sector to test public models for internal effectiveness and appropriateness in an effort to build and broaden environmental practices.

A documented case of government taking initiatives began in 1996 at Belfast City, Ireland. Belfast City Council developed a strategic plan to begin environmental purchasing by City buyers. They implemented its first purchasing strategy that included easier access for suppliers, improve competition within the local community, and conduct

City purchasing activities in an environmental approach. Belfast City Council's first publicity was a meet-the-buyer function along with printed materials explaining how City purchasing decisions are made and identified barriers to entry for small and medium size organizations. Within the 1st year, new local companies were winning contracts, and the Council showed a reduction in expenditures by 10% (Belfast City Council, 1996a, 1996b).

In 1997, the Council implemented a supply chain challenge that gave suppliers an incentive to improve their internal environmental operations. A secondary motive was to encourage them to develop *green(er)* products and services that would distinguish them from their competitors and in turn, developing marketing niche in their industry. The Council continued to develop strategies to enhance environmental development within the local community. Pamphlets and questionnaires were created to encourage two-way communication with buying segments looking to improve selling segments and selling segments looking to improve buying segments. The Council expanded awareness by establishing training workshops focused on the top 50 suppliers. Business cases were discussed, opening up minds to be more conscious of possible areas of improvement (Belfast City Council, 1998a).

In 1998, the Council assigned a purchasing strategic manager to meet monthly with each supplier. Objectives of each meeting were to review past activities and discuss possible areas of improvement. The goal of this outreach was to sustain or improve efficiency while keeping suppliers focused on environmental objectives. The next endeavor in the strategic plan was to set up audits and grade suppliers to achievable criteria. Audits focused on both internal and external activities of suppliers. As a result of

the audit process, a number of suppliers internally switched to using all recycled paper and upgraded computer systems to ones that ran more efficiently. The transition to environmental activities experienced a reduction in supplier operating costs (Murray, 2000).

Also in 1998 the Council adopted two significant policies as an example of their commitment to environmental development. The first policy stated only recycled paper will be used for all paper products purchased and all purchased printing by the City. The second policy was the creation and adoption of a formal environmental purchasing policy (Belfast City Council, 1998b). These policies were communicated to stakeholders through established streams. The Council continued to support communication efforts with breakfast meetings and sustained critical information updates via pamphlets, guides, policies, and other mailings (Belfast City Council, 1998c). Every effort to promote environmental activities required some recognition to keep the drive energetic. The Council developed a "*Green* Supplier of the Year Award" that was considered a prestigious award within community and industry (Belfast City Council, 1998d).

What started as an idea to purchase *green* products and services expanded far beyond the initial objective. Belfast *green* purchasing initiatives achieved the following environmental successes both within the local government and strategic suppliers (Belfast City Council, 1998d):

1. Reduced electricity usage by turning off lights when not needed and replaced standard light bulbs with energy saving bulbs.

2. Introduced an energy usage schedule.

3. Implemented bicycle couriers in place of motorized vehicles where possible.

4. Consistently reviewed production and distribution chain to implement more environmentally friendly processes.

5. Returned waste products for reuse.

6. Placed waste containers for recyclable refuse at convenient locations and encouraged employee participation.

7. Implemented a program to reuse paper-based products.

8. Took into consideration activities minimizing environmental impact in organizational emergency plans.

Murray (2000) explained initially; some suppliers' participation was weak with some did not willingly participate. An effort was made by the Council to contact these organizations to discuss their problems, issues, and barriers. A pointed example has the Council and one firm establishing a 24-month plan to implement an environmental policy and environmental management systems. The firm was successful in meeting all goals and objectives. Murray (2000) explained plans, activities, and successes all happened within a 3-year period.

Purchasing Green

Adoption of *green* purchasing is not automatic for various reasons. Coulson-Thomas (2010) admitted many buyers and suppliers are not aware of buying decision impact on the environment. Miemczyk, Johnsen and Macquet (2012) agreed with Balderjahn's (1988) studies suggested people with a positive attitude towards environmental issues are more active in implementing *green* products into purchasing activities. Another critical factor impacting *green* purchasing is relationships between environmental knowledge, attitude, and behavior (do Paco & Raposo, 2009). Chan (1999) defined *environmental knowledge* as the amount of detailed information a person

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knows about impacts of environmental issues. Environmental issues include a broad range of factors both horizontally in number and vertically in concentration. Chan and Yam (1995), Schahn and Holzer (1990), and Verhallen and Van Raaij (1981) identified inabilities to measure environmental knowledge accurately and provide an understanding of environmental behaviors.

ElTayeb, Zailani, and Jayaraman (2010) stated *green* purchasing plays a significant role in environmental and supply chain strategies for a number of major organizations. Such practicing organizations as IBM, Xerox, Ford, and Toyota directed suppliers to adopt an environmental management system compliant to the International Organization for Standardization (ISO) 14001 certification (Global Environment Management Initiative, 2001).

Drumwright (1994) supported the concept that social responsibility buying is not based on economic factors of price, delivery, and various aspects of quality, but includes other issues of importance based on complexity of factors and its interaction with organizations. Organizations face a difficult challenge deciding when to buy socially responsible or when typical economic factors take preference. Drumwright (1994) stated research for social responsibility buying is based on the following minimal criterion: (a) availability and unrestricted access to organizational buyers; (b) buying process; (c) large organizations with a documented environmental commitment; and (d) an active social responsibility buying program. Min and Galle (2001) added that 78% of surveyed buyers have used factors of supplier position on environmental goods and supplies as important criteria for vendor selection.

Drumwright (1994) believed an organization with interests in social responsibility buying falls into one of four categories: (a) an extension of organizations natural image; (b) activity is performed only as a symbolic exercise; (c) created for opportunities; or (d) a requirement for organizational survival. Organizations that accepts social responsibility buying as an extension of their natural image believes this is part of their culture and is a major consideration in organizational expenditures and internal activities. Organizational goals are modified to address environmental concerns, and management is committed to *green* efforts. *Green* purchasing in this type of organization becomes complicated in an attempt to address organizational goals and satisfy end-users with new products and services. Another social responsibility concern for this type of organization is weighing efforts of small, minority owned, women owned, local, and disadvantaged suppliers against large organizations who are competing for organizational *green* business. Min (2009) provided a guide from Caterpillar, Inc., who segregates social responsibility buying into the following categories:

1. Small business

2. Local suppliers

3. Local trade fairs

4. Minority business

5. Establishment of long-term relationships with local suppliers

6. Yearly measurement of actual activity to social responsibility goals

ElTayeb et al., (2010) believed *green* purchasing has four drivers: (a) regulations; (b) customer pressure; (c) social responsibility; and (d) business benefits. Regulations are set of laws created by government as a response to environmental concerns. Scott and

Christensen (1995) stated regulations can be represented by rules, sanctions, laws, and incentives. Customers as critical stakeholders are users of an organization's product or service and can apply pressure and demand environmental programs. Several studies support a positive influence on customer demand for an organization to adopt *green* purchasing policies and procedures (Alvarez-Gil, Berrone, Husillo, & Lado, 2007; Carter & Carter, 1998; Carter & Ellram, 1996).

Organizations that chose social responsibility buying as a symbolic exercise make decisions solely on organizational success or to minimize government regulations (Handelman, 2006). Such a symbolic effort is often used as a communications tactic to entice stakeholders' interest to a different, more socially acceptable perception of organizations. This effort is often for public image, presenting a preferred idea of organizations from both internal and external perspectives. Professional buyers typically recognize this facade may not be truthful. Drumwright (1994) added buyers tend to resist activities that do not contribute to core foundations of their organization and also contradict their discipline as professional buyers.

Organizations becoming *green* only for opportunities incorporate such activities when it relates to bottom financial lines (Peattie & Crane, 2005). Typically these organizations dismissed early *green* recommendations from any source, but only becomes of interest when it is determined that a *green* strategic plan is best for longer-term existence. These organizations understand most new inventions such as *green* products and services will typically cost more and be of lesser quality compared to existing products and services due to uses of new technology and unproven, long-term use results (Kemp, 1993). Prices typically drop with higher quality, maturity of

technology, risk experience, and competition. Russo and Fouts (1997) believed improved environmental behavior outweigh all higher costs even though studies are not clear and concise.

Besides customers, local communities and society as a whole can be judgmental regarding organization behavior as it relates to environmental activities. Organizations are evaluated based on observing regulations and also voluntary activities that go beyond requirements. Studies by Scott and Christensen (1995), Drumwright (1994), Murphy and Poist (2003), Preuss (2001), and Ravi, Shanker, and Tiwari (2005) found implementing a formal *green* purchasing process led customers and general public to believe organizations were socially responsible.

ElTayeb et al., (2010) reminded business decisions are made on a cost - benefit basis. Breakeven can be a short-term goal of a long-term strategy. Before implementing environmental programs, leadership must be convinced investments have potential benefits. Blumberg (1999), Min and Galle (2001), Preuss (2001), and Ravi et al. (2005) performed studies suggested *green* purchasing can a positive effect on how businesses are viewed.

When starting a *green* purchasing program, buyers look to areas where conversion have minimal impact on their organization and fit into their established purchasing process. Polonsky et al., (1998) stated a buyer's approach and sensitivity towards purchasing recycled paper products has several advantages: (a) they are straightforward purchases; (b) suppliers readily carry recycled paper line; (c) can be used as substitutes in organizational use; and (d) buyers can influence negotiations. Polonsky et al., (1998) found advantages in buying products with recycled content: (a) process of product use

requires minimal to no change in behavior; (b) purchasing process is less complicated; (c) buyers can justify purchase; and (d) products fit into organizational purchasing structure. With additions of purchasing products containing a recycled content becoming more readily available, Polonsky et al. (1998) classified purchases into three distinct categories: (a) new, (b) partial recycled content, and (c) full recycled content. Polonsky, Brooks, Henry, and Schweizer (1998) agreed with Doyle, Woodside, and Michell (1979) stating purchasing processes for new category purchases were most complex and full recycled content category purchases were most straightforward. Study found purchases with full recycled content took less time to complete end-to-end purchasing process, had fewer decision-makers involved, and products were easily distinguishable from comparative products.

In a study of purchases of recycled paper from 11 organizations with 100 employees or more and input from 16 buyers, Polonsky et al. (1998) confirmed the following results:

1. All buyers (100%) felt that the environment was an important issue and will influence buying behavior into the future.

2. Only three organizations (33%) established a formal function for environmental concerns.

3. Six organizations (66%) developed green purchasing policies.

4. Eight organizations (88%) were purchasing recycled paper products.

5. Committed organizations took action to communicate environmental responsibility throughout all levels.

6. Buyers of committed organizations believed they were setting examples for other organizations.

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7. Organizations were experiencing pressure from the government and public stakeholders to adopt more green purchasing into their requirements.

8. Two buyers (16%) agreed that purchasing recycled paper would improve company image to the public.

9. Buyers were hindered by vendor capabilities to deliver suitable products.

10. Buyers were less than satisfied with the information supplied and service levels of vendors to support a green agreement.

11. Six buyers (38%) acknowledge negative experiences whereas two (16%) stated positive experiences.

Environmental behavior is influenced by stakeholder, and arguably the most important stakeholder-customer at a university is the student (Shriberg, 2007). Kagawa's (2007) study concluded (a) majority of students believe in sustainability; (b) strongly associates sustainability actions with organizational economic and social characteristic; (c) looks to university purchasing, staff, faculty, and fellow students to change habits to be more environmentally conscious; and (d) have mixed views on future of society as a whole.

Kagawa (2007) added internationally there is a convincing political influence to implement sustainable education at all levels. It is predicted that by 2015, higher education will be acknowledged as key providers to society's efforts to achieve sustainability (Higher Education Funding Council for England, 2005). A university can not only practice EPP but also add courses and degrees to prepare for an adjusting society. The United Nations has supported this educational outreach by naming the 2005 to 2014 decade as the United Nations Decade for Education for Sustainable Development (UNECE). The Brundtland Commission Report (World Commission on Environment and Development, 1987) explains sustainable development as "development that meets the

needs of the present without compromising the ability of future generations to meet their needs."

The Higher Education Academy (HEA, 2006) developed environmental knowledge based on the following educational criteria:

1. Appreciation for the importance of environmental, social, political, and economic content of each discipline.

2. A balanced and expansive knowledge of sustainable development and debated issues.

3. Related problem-solving skills.

4. Ability to think creatively and holistically to make judgments.

5. Ability to relate self to professional environmental goals.

6. Ability to receive, identify, comprehend, appraise, and implement new values of sustainability.

7. Ability to bridge gaps between theory and practice.

8. Ability to enhance creativity among stakeholders.

9. Ability to initiate and direct change.

With topics of environmental studies being one of mixed values, beliefs, and practices, Huckle (1999) reminded disciplines cannot be established to address one perspective. Selby (2006) agreed there should be no single framework, conceptualization, and understanding of sustainable development or sustainability.

Selby (2006) recommended a university focus on four key areas to develop a rounded environmental program:

1. Curriculum. Create course models that address sustainability principles.

2. Campus. Make college campus *green* with students engaged in decision-making.

3. Community. Expand projects to local communities and establish partnerships.

4. Culture. Look to change behavior.

These four sections can stand independently as a particular university goal project or grouped as a program. According to Carew and Mitchell (2002), an environmental curriculum within a university would be difficult to adopt, since environmental publications for student education and development are limited.

Mulder (2010) argued universities who teach environmental studies should also practice ecological activities, especially in areas of *greening* campus facilities, land, and *green* purchasing. Universities produce leaders of tomorrow, and they should be taught and practice environmental responsibilities. In Mulder's (2010) study on sustainable development (SD), teachers agreed to the following teaching points: (a) be in full support of SD discipline; (b) only speak positively of SD; (c) show connections between SD and human rights and international law; (d) statements containing political organizations are not acceptable; and (e) understand such topics as social-economic issues, violence, nuclear energy, and vegetarianism are controversial. Lacey (1999) added SD education discuss value-related cases but be neutral on weight of criteria and values.

Performance measures are recommended in any process to determine levels of success to achieve goals (Camp, 1998). Bartos (1974) and Miemczyk et al., (2012) added measurements within purchasing processes are sensitive because of several variables are in a dynamic state due to internal and external fluctuations in the environment. Coggburn (2004) emphasized measuring *green* purchasing policy effectiveness is a difficult task,

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but suggested three approaches: (a) weigh performance to clear and attainable goals, (b) measure progress in a recognized unit of measure such as CO_2 emissions, and (c) quantify changes in supplier behavior in both product line depth and internal actions.

Coulson-Thomas (2010) presented a challenge to organizations with the following questions:

1. Does your Board understand the organization's impact on the environment?

2. Does your organization properly train your end-users to make educated choices regarding environmental purchasing?

3. Can training increase cooperation between end-users, purchasing, and suppliers?

4. How is organizational training conducted? At the work site or externally?

5. How detailed is your educational program concerning environmental purchasing?

Green Purchasing Mission Statement

Padgett (2008) informed original intents of mission statements were to explain the purpose of organization and contribution to society. Organizational mission statements are no longer a superficial testimony, but act as a vehicle to share values and control behavior. Employees feel missions do influence their professional thinking and behavior (Verma, 2009/2010). Within an organization, employees need a reason to perform to accepted behavior. Studies suggest employees want more than a paycheck to remain committed to organizational goals (Reis & Pena, 2001). One method to entice and encourage behavior is to communicate, support, and preserve purpose of organization goals and mission statements (Levering, 2000).

Welsh and Carraher (2009) added mission statements are a representation of strategic direction through established goals and objectives. Mission statements provide leadership with guidance and direction internally and also communicates identity external (Leuthesser & Kohi, 1997). In an effort to control behavior, Morsing (2006) explained mission statements act as a disciplining device. Such statements can formally present burdens on employees whose acts are not in parallel with a mission. If organizational behavior contradicts mission statements, either behavior needs to change, or mission statement needs to be modified.

It is often common internal departments will create their mission statement that complements organization and their unit discipline (Hammond, Harmon, & Webster, 2007). Welsh and Carraher (2009) believed departmental mission statements are essential for members to understand the purpose of unit and strategy to achieve its vision. Welsh and Carraher's (2009) study provided a departmental mission statement sampling of 214 colleges and universities. From the sampling, 82% had mission statements for an independent, essential function within the organization. Authors cited in the literature review acknowledged significant limitations in this study, but there is a definite need to demonstrate the existence of internal mission statements to support organizational goals.

University, purchasing department, and *green* purchasing mission statements demonstrate a university's commitment to the *green* movement. Lack of *green* mission statements may also be due to inconsistency in practices and few standards within the dynamic *green* movement (Azzone and Nucci, 1998; Wenk, 2008).

Conclusion

This review of the literature strongly addresses the stated research question and purpose of this dissertation. Literature review focused on four critical constructs relevant to EPP.

Organizational and Departmental Design

Universities are structured to achieve educational and research objectives, and operate business functions supporting organizational values and assist in their mission. King's (1995) acknowledged functions of a university are unlike a structure that solely matches business requirements, but Gopal (2013) differed stating business management discipline is successfully utilized in higher education. The dynamics (or lack of) influences in an organization's internal and external environments drive organizational design and supporting internal departments. To sustain university objectives, internal departments also function efficiently and effectively with their particular internal and external environments (Nelson, 2003).

EPP introduces a different set of internal and external influences to which organizations must understand and adapt. Porter and van der Linde (1995) believed structures required to support an efficient *green* program prevail over new administrative costs over a long term perspective. Identified were design arguments between centralized and decentralized purchasing functions for an organization (Gianakis & Wang, 2000; Gansler (2002). Centralized or decentralized design impacts communication, accountability, and process cost. Each opinion demonstrated efficiencies and inefficiencies are impacting stakeholders differently. It was not identified which design best adapts to an EPP program.

Leadership Role

Organizations experience changes in both internal and external environments that influence leader behavior. Identified were many different styles, traits and characteristics of leadership (Cangemi, et al, 2008; De Pree, 1989; Sarros & Santora, 2001; Dansereau, et al, 1975; Graen & Uhl-Bien, 1995; Stanford et al, 1995; Fitzgerald, 2007; House, 1971; Kearsley, 2005). Clopton (1984), Michaels et al., (1987) and Pine and Gilmore, (2014) stated actions of purchasing leaders impact the buying culture of the organization.

Buy-in from leadership is critical to EPP program success. There is also a position where executives see *green* purchasing as a menial exercise in public image that is not essential to organizational survival (Harris & Crane, 2002). It was not identified which leadership style, trait, or characteristics best adapts to an EPP program.

Buyer Behavior

Buying processes are composed of intricate steps and alternatives continually influenced by many independent variables created from internal and external environments. Since buyers consistently work with conflicting objectives generated internally and externally, work atmosphere naturally leads to role conflict. Results of role conflict often force buyers to defend positions, beliefs, ethics, laws, and contractual agreements among various stakeholders who possess differing perspectives that are logical from their lens (Michaels et al., 1987).

As with leaders, buyers also have key identifiable traits. Ghosh (2008) stated personality is central to negotiating through business decisions and also identified three different traits supporting an active buyer: (a) need for certainty, (b) self-confidence, and (c) need to achieve. The buying position is also known for receiving bribes from sellers in

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an attempt to win contracts (Forker & Janson, 1990; Segal & Lehrer, 2013). Since buyers' roles usually operate independently (Jackson & Schuler, 1985), unethical sellers see this as an opportunity to influence purchasing decisions. It is critical to an organization that buyers also possess the trait of honest with high ethical standards (Robertson & Ross, 1995).

Buyers have the responsibility to supply the organization with goods and services that are required to survive and achieve goals. Obtaining essential skill sets may require specialized training, education, and experience. Actions of buyers and sellers are governed by contract law that control document meaning, individual behavior, and party responsibilities (King & Ritterskamp, 1998; Rasmusen, 2004). To supply organizations with critical goods and services, buyers must develop trusting and cooperative relationships with suppliers. A trusting and cooperative relationship minimizes decision uncertainty (Katsikeas et al., 2004). As with many types of activities and processes, buying activities and processes are measured to weigh and determine effectiveness. Purchasing activities and processes poses benchmarks or standards in which to measure progress towards program goals (Sanchez-Rodriguez et al., 2003). It was not identified which buyer traits, characteristics, personality, education, or experience best adapts to an EPP program. Benchmarking standards were also nonexistent.

Environment Outreach

Buyers within an organization can be segmented by commodity, geographic location, dollar threshold, or risk. EPP at universities has grown to touch many commodity areas, such as general day-to-day low-risk purchases, furniture, facility maintenance, construction, food, and energy. EPP spreading across all buying segments

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presents a dilemma for departmental design. With product and service evolution and environmental dynamics, effective *green* purchasing requires developing a working relationship between stakeholders by demonstrating environmental knowledge, favorable attitude, and goal committed behavior (do Paco & Raposo, 2009).

There is also the argument comparing *green* cost versus benefit. *Green* purchasing had a history of providing inferior products at a higher cost (Kemp, 1993). Unless leadership fully supports an EPP program, end-users with budgetary responsibilities will naturally lean towards the lower cost – higher value products. *Green* purchasing activities have shown to exhibit other additional benefits. Blumberg (1999), Min and Galle (2001), Preuss (2001), and Ravi et al., (2005) found *green* purchasing has positive effects on how business is viewed both internally and externally. Government support, either encouraged or forced through regulation, along with providing funding has also helped organizations convert to environmentally friendly practices.

Identifiable Variables

This review has also established several inconsistent variables bringing complexity to EPP design and operations:

    a) Universities possess different missions and operational structures (Taylor & De Lourdes Machado, 2006; Msimangira, 2003).

    b) Many influential stakeholder interests (Rivera-Camino, 2007) complicate purchasing processes (Erdmenger, 2003), and EPP fulfillment adds to objective decisions (Bai, Sarkis, Wei, & Koh, 2012).

    c) Standards for environmental definitions have not been globally accepted (Wenk, 2008).

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d) *Green* purchasing process activities are more complex then established commodities (Zhu et al., 2010).

e) Leadership is situational (Jayasingam et al., (2010) and has limited studies in *green* purchasing due to lack of a stable history (Gupta and Ogden, 2009) or lack of an organizational environmental strategy (Guenther et al., 2010).

f) Leadership misunderstands Purchasing's organizational contributions and does not see activities as critical (Msimangira, 2003), minimizing upper management support.

g) Buyer qualifications (do Paco & Raposo, 2009), buyer commitment (Drumwright, 1994), and buyer techniques (Leonidou, 2005) are not consistent.

h) Universities funded by States have legal EPP requirements whereas independent universities have the option to adhere to some regulations (Guenther et.el, 2010).

This list suggests a *green* purchasing program at a university has many formidable obstacles coming from various aspects of internal and external environments. EPP has demonstrated minimal consistency, little history, various levels of commitment, and no agreed best practice. One indirectly related topic having limited studies is universities' cultural effect on purchasing. Besides university culture that is usually well established and inflexible in its ways, Chapter 2 acknowledges issues of designing organizational structures and processes to make *green* purchasing effective and efficient, reliable leadership knowledge and support, competent buyers having experience and continue to

seek knowledge to grow with changes in *green* movement, and finally monitoring dynamic changes in environmentally focused goods and services.

This review of the literature found no published articles concerning *green* purchasing from any organizational design perspective. Literature strongly suggests that organizational design, leadership, buyer qualities, and *green* commodity are compellingly dominant factors that impact success or failure of an EPP program. Lack of studies confirms the need for qualitative research in this field.

CHAPTER 3. METHODOLOGY

The purpose of this qualitative multiple case study was to explore behaviors, processes, and practices associated with four interdependent constructs in an attempt to understand and explain how they impact an Environmentally Preferred Purchasing (EPP) program within a university purchasing setting. Four constructs including (a) organizational and departmental design; (b) leadership; (c) buyer behavior; and (d) environmental outreach has been generally defined as influencing activities and their effects on achieving EPP goals. This study attempted to identify key issues to be considered before, during, after implementation.

Research questions focus on the four constructs:

1. How do organizational and departmental designs influence purchasing decisions in an EPP program within a university purchasing department?

2. How does leadership influence the implementation and operation of an EPP program within a university purchasing department?

3. How does buyer behavior influence the implementation and operation of an EPP program within a university purchasing department?

4. How do current trends in environmental interests influence purchasing decisions in an EPP program within a university purchasing department?

Research Design

In order to build theory related to EPP, this study followed nine steps outlined by Eisenhardt (1989). The nine steps presented in the research design is an overview with details and support presented later.

Step 1 - Getting Started. Develop a well-defined focus. Theory-building research begins close to the concept of no theory to test. This study examined influences that affect decisions for EPP in a university setting and took into consideration four distinct constructs: (a) organizational and department design; (b) leadership; (c) buyer behavior; and (d) environmental outreach.

Step 2 - Selecting Cases. Cases are chosen for theoretical reasons, not statistical. Cases can be chosen at random with no impact on the findings. A search of university websites showed few supporting EPP activities with a *green* mission statement. Four universities who practice EPP were chosen based on their *green* mission statement and their proximity to the researcher.

Step 3 - Crafting Instruments and Protocols. Interviews, observations, and archival sources are used. Triangulation provides a stronger argument. An interview guide consisting of open-ended questions was used as the data collection instrument. Eisenhardt's (1989) approach incorporates interviewing to gather data unique to the case and be flexible to the individuality of data understanding and use. Bourgeois and Eisenhardt (1988) argue that research results established from triangulated sources is an approach for the development of new theory. While the triangulation of the data sources varied from case to case, the critical areas of (a) organizational and departmental design; (b) leadership; (c) buyer behavior; and (d) environmental outreach were covered. In

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addition, data was obtained from several sources including college websites, observations, reports, and historical records.

Step 4 - Entering the Field. Overlap of data collection and data analysis is common. It is also acceptable to alter and add data collection methods because each study subject is unique. With no set standards for implementing or measuring EPP success, it was found that each organization approached and responded to research questions differently, based on their interpretation of data. As expected it was also found that the response from each participant within each organization had a stronger focus or bias centered on their position and responsibilities as a process stakeholder.

Data gathered from participants frequently addressed more than one construct per question. Data overlap was experienced due to individual understanding of questions and organizations actions. Eisenhardt (1989) stated that data overlap in collection and analysis is customary but "more importantly it allows the researcher to take advantage of the insights and adjust the data collection process for future cases." Open-ended questions were altered in an effort to understand each organization individually, allowing themes to materialize.

Step 5 - Analyzing Within-Case Data. Analyzing and coding data are difficult to achieve. Each case must stand on its own. Each case was introduced to the study with the same email introduction of the research objective and the constructs, allowing the participants to prepare for the interview. All interviews began with a set of pre-established open-ended questions. The information exchange after opening questions took different paths as each participant addressed questions based on their interpretation

and use of data. Responses inspired additional questions and introduced other collection methods (e.g. archives and reports) to clarify or substantiate replies.

In each case, data collection, analysis, and coding stood on its own. Uniqueness of data collected compelled a within-case analysis, resulting in detailed documentation unique to the case. No pre-conclusions or bias' were consciously used to base results obtained from the same area of influence. Eisenhardt (1989) stated there is no standard format for analysis allowing the researcher to collect data as it is presented and not force data into predetermined classifications.

Step 6 - Searching for Cross-Case Patterns. Obtain data from various methods; triangulation. Prevent bias and jumping to conclusions. Eisenhardt (1989) provided three strategies for cross-case comparisons. First, with-in group similarities are explored with intergroup differences looking for common themes. For example, is there a typical leadership style (e.g. democratic vs. autocratic), does the buyer work independently or dependent on others in the organization, and are all structures centralized or decentralized? Common themes are the reasoning for the creation and significance of categories.

Second, select two cases and identify similarities and differences. Similarities and differences can be based on result, process, or input. Isolating and pairing two cases can lead to a more advanced appreciation of the data and in turn create new and practical categories.

Third, divide the data by collection method. Are the answers to the questions supported by or contradicted by reports? Contradictions can be explored, and additional

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questions may be required to obtain a better understanding of the condition. Do they state they are successful, but reports show minor gains in the program?

The first two strategies were achieved based on the collection method of open-end questioning. The third strategy was used when the organization provided additional data from a different source.

Triangulation occurs when the organization provides information from more than one source. Data sources utilized were interviews, non-verbal communication, historical records, documents, and information on case website. Utilization of these three strategies for cross-case comparisons, details required for a within-case analysis, and triangulation deterred researcher bias and the ability to jumping to conclusions.

Step 7 - Shaping Hypothesis. Relationships and concepts become apparent. Shaping hypothesis (propositions) in theory-building is dependent on measuring paradigms and verifying relationships. Eisenhardt (1989) presented a two-part process in developing propositions: (a) refining construct definitions and (2) gather measurements to build support in each case. In refining construct definition, conditions that influenced an EPP program in a university purchasing department were identified through literature research. Applicable data gathered was shaped by the literature review and open-ended questions the instrument used to obtain information from a selected population. Data collected formed paradigms that were grouped, developing similar circumstances and relationships.

Relationships for all cases became evident during the cross-case analysis. Ten relationships labeled as "Subject" were determined at the highest level of analysis: (a) Control; (b) Culture; (c) Education; (d) Group; (e) Leadership;(f) Organization Design;

(g) Planning; (h) Purchases; (i) Resources; and (j) Service. From Subject more finite

relationships developed from the ten subjects labeled as "Topic." Topics were commonly

found to be in more than one subject demonstrating relations. Topics are listed in Table 3.

Table 3.

Sub-level topic groupings from cross-case analysis.

Awareness	Employee Benefit	Impact	Purchasing	Social Involvement
Behavior	End-user	Introduce first product to start program	Quality and cost effective	Safety
Budgets	Experience	Opportunities	Recycle	Spend
Commitment	Farm education	Organization Design	Reduce carbon footprint	Staffing
Compliance	Funding	Overall Grade	Reporting	Stakeholder Agreement
Composting	Goals	Policy	Research	Standards
Cooperation	Goods	Pricing	Responsibility	Student jobs
Copy paper	*Greenwashing*	Program	Sales	Supplier Relationship
Custodial Services (Outsourced)	Hierarchy	Purchasing Activities	Satisfaction	Sustainability Manager

Table 3. Continued

Drinking Water	Information	Purchasing Manager	Savings	Transportation
Energy	Interaction	Purchasing System		

Step 8 - Enfolding Literature. Compare relationships and concepts to existing literature. A wide range of literature was used for comparison. In Eisenhardt's eighth step, researcher identified key research paradigms related to constructs and propositions identified in Step 7 and analyzed whether previous research supports or contradicts conclusions. Previous research was analyzed to determine if it is consistent, inconsistent, or silent on the constructs and propositions in Step 7.

Information gathered from scholarly literature research focused on conditions that influence an EPP program. Literature was obtained from the general areas of (a) organizational and department design; (b) leadership; (c) buyer behavior; and (d) environmental outreach. The scope of the research included (a) purchasing departments existing in for-profit and non-profit organizations; (b) history of *green* movement; (c) magnitude of *green* influence in consumers; (d) stakeholder influence; (e) sustainability programs in for-profit and non-profit organizations; (f) buyer-seller relationships; (g) culture in higher education; (h) supply chain management; (i) government impact; (j) change management; (k) marketing techniques; (l) contract law; and (m) qualitative case studies.

Step 9 - Researching Closure. Eisenhardt (1989) stated that the time for research closure is when new information becomes insignificant. Glaser and Strauss (1965) stated *"Theoretical saturation is simply the point at which incremental learning in minimal because the researchers are observing phenomena seen before."* For qualitative theory building, Eisenhardt (1989) believed that the optimal number of cases for a study is between four and ten. Results from less than four have minimal credibility and results from more than ten present large amounts of complex data that may be too difficult analyze.

Miles and Huberman (1994) presented issues to determine study closure. First, readers of the study need to understand that findings could be wrong and "may not fit the data." Second, studies are performed by individuals suggesting that qualitative studies involving human judgment are continuously less accurate than quantitative based studies. Such conclusions argue a conclusive definite point in study closure because of the inability to find verifiable and consistent conclusions.

This study setting is universities practicing EPP; a dynamic organization type and a dynamic business concept. This study of EPP is currently without boundaries due to the constant and inconsistent internal and external natural influential dynamics in universities accompanied by continuous evolution in world-wide *"green"* development. Contributing to the dynamics are organizational factors based on project funding, stakeholder influence, and influential views from society.

Eisenhardt (1989) also added that in a multi-case qualitative study it is acceptable to utilize other realistic factors to determine research closer such as time and money. Time was a consideration in closure of this study, but only after critical criteria was

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obtained from colleges practicing EPP. Knowing that an agreeable conclusion is not achievable in a theory building study, publications from Eisenhardt (1989), Glaser and Strauss (1965), and Miles and Huberman (1994) provide a sound base for closure.

Since no two organizational cases are exactly the same in influences from all four constructs, theoretical saturation is arguably limitless. For closure criteria, this study worked within the Eisenhardt (1989) case number limits of four to ten. With a search of qualified organizations within the locality being seven, four were willing to participate in this study satisfying Eisenhardt criteria. The four cases for this study represent organizations from three different states. Time restricted the researcher to determine EPP diversity outside of what is published on the organizational website. Participation diversity is a requirement to understand saturation and closure.

Yin (2009) provided five components of research design:

1. *Study Questions.* Even though EPP have existed for decades, behavioral studies in a purchasing department has not been studied regarding the effects of four constructs of (a) organizational and department design, (b) leadership, (c) Buyer behavior, and (d) environmental outreach. Since each organization poses diverse goals impacted by financial and human resource differences, it is unclear how such influences affect EPP. With no set standards for implementing or measuring EPP success, each organization addressed behavior in a unique manner involving practices and procedures influenced by funding, a variety of stakeholders along with data sources.

2. *Propositions.* Eisenhardt (1989) step 3 encouraged the use of interviews, observations, and archival sources as instruments to understand influences in a

case. This study examined influences that affect decisions for EPP programs in four college settings (cases) taking into consideration four distinct areas of influence (constructs).

3. *Units of Analysis.* Derived from the four EPP constructs, units of analysis are (a) organizational and department design; (b) purchasing activities; (c) leadership style; (d) leadership actions; (e) stakeholder influence; (f) stakeholder commitment; (g) Buyer influence (h) Buyer activities; (i) information access; (j) communication; and (k) *green* market (e.g. external environment.

4. *Linking Data to Propositions.* Data from each case were individually grouped into like themes and categorized by commonality. Eisenhardt (1989) Step 5 introduces "Analysis with-in Case Study" and Step 6 presented "Searching for Cross-Case Patterns" to compare individual case findings with all groups searching for commonality and uniqueness.

5. *Criteria to Interpret Findings.* Eisenhardt (1989) Step 7 discussed "Shaping Hypothesis." Cross-case patterns formed paradigms and grouped to form relationships.

Utilizing open-ended questions with purchasing, sustainability, and other participants knowledgeable about objectives, structure, and influences regarding EPP in a college setting, interviews were conducted to obtain data. This study is a multiple case study approach as described by Eisenhardt (1989) and Yin (2009). Cases were first analyzed individually in order to comprehend and understand the rareness of a case under consideration in accordance with Stake (1995). This study investigated circumstances

within real-life situations when the context was not clearly apparent in the beginning but became necessary in the analysis (Woodside & Wilson, 2003). Consistent with Yin (2009) this study involved a detailed investigation of distinctly contemporary activities within its environment using multiple data sources.

For this study, information obtained were analyzed using inductive reasoning from a variety of qualitative tools and techniques. Miles and Huberman (1994) provided three approaches to qualitative analysis: (a) Interpretivism; (b) Social anthropology; and (c) Collaborative social research. Of the three approaches, Interpretivism was used for the study. Miles and Huberman define Interpretivism as utilizing interview questions and documenting behavior. Researcher utilized open-ended interview questions and observed and documented non-verbal behavior that demonstrated sincerity and compassion. Berg (2004) argued that inductive reasoning begins with a review of detailed data with an objective of developing themes into groups or categories. Inductive reasoning aids creation of cross-case themes, groups, and categories of relational data, giving credibility and confidence to the analysis.

Sample

The population consisted of all accredited universities and colleges in the United States, both public and private. In November 2010 the National Center for Education Statistics (NCES) stated that in 2008-2009 there were 6,632 postsecondary Title IV institutions in the United States. Calhoun (2009) quoted Cardinal Newman's definition of a college simply as "a place of teaching universal knowledge." Davis (1996) added humor in a definition she found quoted "an accumulation of prima-donnas, held together

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by an ever-decreasing number of parking lots." The word "prima-donna" can be seriously argued as a clear influence creating an academic culture.

This qualitative case study was limited to purchasing activities in colleges located in the northeastern United States that practice EPP. A detailed search of university websites in the designated area of the northeastern United States (Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, Connecticut, New York, Pennsylvania, and New Jersey) identified seven organizations that meet the criteria of an organization practicing EPP. Criteria being (a) university or college, (b) northeastern United States, and (c) organizational websites stating such phrases suggesting "*green* purchasing," "sustainable purchasing," or "EPP" being practiced.

Case Selection

Population consists of colleges or universities that practice EPP in the United States. Cases were identified from an Internet search utilizing Google search engine. To focus on the population, keywords of "university," "college," *"green,"* and "environment" were entered for criteria. Initial return was over 221,000,000 records. To reduce the number of records and to make the study feasible for cost and time, states of Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, Connecticut, New York, Pennsylvania, and New Jersey were entered as additional keywords. This reduced the number of records to 1,710,000.

Next step involved a visual scan the record titles, focusing on context and confirming the site domain equal to *.edu*. Though a time-consuming effort, possible cases were identifiable from the record title. The next effort was to review EPP related

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documentation within the website to obtain a level of commitment. Seven schools in the nine states met this level of criteria.

Step 1. Using Google as the search tool entered the keywords of "university," "college," *"green,"* and "environment" for the criteria.

Step 2. From the results of Step 1, the states of Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, Connecticut, New York, Pennsylvania, and New Jersey were entered as additional keywords.

Step 3. Visual scan the record titles, focusing on the context and confirming the site domain equal to *.edu*.

Step 4. Review organization's website for EPP or *green* commitment.

Step 5. Identify all cases with a clear EPP or *green* commitment.

Individual Participant Selection

The representative who agreed to the initial recruiting document became the organization's main contact unless otherwise advised. Primary contacts were asked to send recruiting forms to others in the organization that has knowledge in current EPP processes, development, or concept. Ideal subjects for the interview are representatives of purchasing department who are knowledgeable about operations, policies, processes, buyer qualifications, leadership, and EPP program. Purchasing positions were department head, buyer, or program coordinator. To add value and diversity of the data, additional representatives were encouraged to participate. Representatives included such stakeholders as an influencing leader, staff from sustainability department, a department manager, an end-user, a department buyer (decentralized), faculty, and a student.

To understand the commitment and expectations, potential participants contacted the researcher before the interview to discuss concerns. The researcher provided personal cell and home phone numbers, email, and home address in all email communication.

Step 1. Sent invitation letter to the head of the purchasing or sustainability department.

Step 2. Followed-up with a phone call to introduce self and purpose of the study, encouraging organizational participation.

Step 3. Acknowledged receipt of acceptance or rejection via same mode of communication.

Step 4. Provided participants a document stating next steps in the process and perceived weeks available to interview.

Step 5. Asked organization's contact to distribute invitational letter to other stakeholders.

Step 6. Requested all participants to sign the invitation to participate letter.

Step 7. Acknowledged receipt of acceptance or rejection of the invitation to participate letter via the same mode of communication.

Step 8. Provided the next steps in the process and perceived weeks available to interview.

Sample Size for Cases Determination

Search resulted in identifying only seven qualified organizations with four agreeing to participate. Glaser and Strauss (1965) specified that a sample size of between 4 and 10 cases can satisfy data collection objectives when literature and case studies are limited. Bryman (2008), Creswell (1998), Mintzberg (1979), Pettigrew (1988), Srnka

and Koeszegi (2007), and Yin (2009) also agreed that sample size can be small in number and be acceptable for multiple-case qualitative studies.

Yin (2009) believed that when using multiple case designs, number of cases selected is immaterial because the sampling logic is not used. Srnka and Koeszegi (2007) acknowledged that qualitative research has traditionally been accepted with a small sample and Mintzberg (1979) stated that a limited qualified sample size is applicable when a clear focus is established, and data is collected systematically. Bryman (2008) and Creswell (1998) explained that a study is not based on the quantity of the sample size, but the qualifications of the sample with direct knowledge of the questions in the interview.

Individual Participant Sample Size Determination

Cases selected have diversity in size and recognition with each participant understanding their role and influence in the EPP process. Since EPP design and implementation concerning the four constructs in universities has not been studied as a whole, it was verified that there were dissimilar designs, leadership, commitment, and buyer behavior among universities due to stakeholder influence and funding.

Primary participants in this study represented the stakeholders that have influenced or are currently influencing the EPP process. The primary participants came from the following organizational areas: (a) head of purchasing; (b) sustainability buyer; (c) influencing leader, (d) head of sustainability, (e) faculty in sustainability, (f) department manager; (g) decentralized buyer; (h) end-user; and (i) student. Job diversity is essential to the study in an effort to gather the needs and restrictions of stakeholders directly and indirectly involved in the process.

Critical to a successful interview is a close and confident relationship between the researcher and participants. To meet the combination of obtaining sufficient and reliable data through a close relationship, Crouch and McKenzie (2006) believed 15 to 20 participants is adequately for a sample size. The researcher encouraged a minimum of four representatives from each organization. The total number of participants from four cases was 16. Guest, Bunce, and Johnson (2006) stated a minimum 15 participants can satisfy most qualitative interview studies.

Setting

The setting is purchasing departments in universities located in the northeastern United States that practice EPP. Most interviews were conducted in a private room on the physical grounds of the University. Because of distance or convenience to the participant, Skype was also successfully utilized.

Instrumentation/Measures

The instrument used to gather data was the interview using open-ended questions focused on the four constructs of: (a) organizational and department design; (b) leadership; (c) buyer behavior; and (d) environmental outreach. All interviews were conducted solely by the researcher for data collection consistency and understanding of data use.

To minimize bias and determine quality and quantity of questions required to address research objectives, a panel of experts was chosen to examine interview questions for scope and depth of data requirements. The expert panel consisted of varied background reviewed the validity of interview questions. This panel consisted of purchasing professional practitioners with an understanding of reaching purchasing

objectives within a college environment and scholars with knowledge of qualitative research and sustainability. Such a panel from different backgrounds and different demographics presented a diverse position of the questions. Knowledge of EPP is preferred but not required of all members of the panel. Areas such as cost, process, time, quality, and customer service were scrutinized from different viewpoints.

The expert panel was comprised of four practitioners that bring diversity to the question review. The skill set included one scholar with knowledge of qualitative research and three purchasing professionals with an understanding of obtaining purchasing objectives within a college environment.

Four experts agreed to participate in the question review. Panel members were asked to "review to identify major gaps. These questions are designed to lead into a specific area. You may want to say 'have you considered X in the four areas.' Please understand there is no rating on your review. Everyone on my expert panel brings a different perspective. There is no right or wrong. Your review is based on your knowledge and expertise. Your comments are not shared with the expert panel."

Measures from interviews, observations, archival sources, and websites provided the triangulation supporting a stronger argument. An interview guide consisting of open-ended questions was used as the data collection instrument. Eisenhardt's (1989) approach incorporates interviewing to gather data unique to the case and be flexible to the individuality of data understanding and use.

Data Collection

Data collection for this multiple case qualitative study consisted of (a) participants interviewed in a safe, comfortable environment; (b) field notes taken and recorded with a digital audio recorder; (c) researcher monitored participants comfort level; and (d) researcher offered participants the opportunity to review their contribution. Interviews based on each of the four constructs began with a series of high level, open-ended questions focused on each construct topic.

Data Analysis

Data analysis procedure followed Eisenhardt (1989) nine steps described in starting with *Step 5* through *Step 8.*

Step 5 - Analyzing Within-Case Data. Analyzing and coding data are difficult to achieve. Each case must stand on its own. Each case was introduced to the study with the same email introduction of the research objective and the constructs, allowing the participants to prepare for the interview. All interviews began with a set of pre-established open-ended questions. The information exchange after beginning questions took different paths as each participant addressed questions based on their interpretation and use of data. Responses inspired additional questions and introduced other collection methods (e.g. archives and reports) to clarify or substantiate replies.

In each case, data collection, analysis, and coding stood on its own. Uniqueness of data collected compelled a within-case analysis, resulting in detailed documentation specific to the case. No pre-conclusions or bias' were consciously used to base results obtained from the same area of influence. Eisenhardt (1989) stated there is no standard

format for analysis allowing the researcher to collect data as it is presented and not force data into predetermined classifications.

Step 6 - Searching for Cross-Case Patterns. Obtain data from various methods; triangulation. Prevent bias and jumping to conclusions. Eisenhardt (1989) provided three strategies for cross-case comparisons. First, with-in group similarities are explored with intergroup differences looking for common themes. For example, is there a common leadership style (e.g. democratic vs. autocratic), does the buyer work independently or dependent on others in the organization, and are all structures centralized or decentralized? Common themes are the reasoning for the creation and significance of categories.

Second, select two cases and identify similarities and differences. Isolating and pairing two cases can lead to a more advanced appreciation of the data and in turn create new and practical categories.

Third, divide the data by collection method. Are the answers to the questions supported by or contradicted by reports? Contradictions can be explored, and additional questions may be required to obtain a better understanding of the condition. Do they state they are successful, but reports show minor gains in the program?

The first two strategies were achieved based on the collection method of open-end questioning. The third strategy was used when the organization provided additional data from a different source.

With limited sources available to confirm information obtained from interviews, triangulation was problematic across all groups and topics. Triangulation occurs when the organization provides information from more than one source. Data sources utilized were

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interviews, non-verbal communication, historical records, documents, and information on case website. Utilization of these three strategies for cross-case comparisons, details required for a within-case analysis, and triangulation deterred researcher bias and the ability to jumping to conclusions.

Step 7 - Shaping Hypothesis. Relationships and concepts become apparent. Shaping hypothesis (propositions) in theory-building is dependent on measuring paradigms and verifying relationships. Eisenhardt (1989) presented a two-part process in developing propositions: (a) refining construct definitions and (2) gather measurements to build support in each case. In refining construct definition, conditions that influenced an EPP program in a university purchasing department were identified through literature research. Applicable data gathered was shaped by the literature review and open-ended questions the instrument used to obtain information from a selected population. Data gathered formed paradigms that were grouped, developing similar circumstances and relationships.

Relationships for all cases became evident during the cross-case analysis. Ten relationships labeled as "Subject" were determined at the highest level of analysis: (a) Control; (b) Culture; (c) Education; (d) Group; (e) Leadership;(f) Organization Design; (g) Planning; (h) Purchases; (i) Resources; and (j) Service. From Subject more finite relationships developed from the ten subjects labeled as "Topic."

Bourgeois and Eisenhardt (1988) stated that research results established from triangulated sources is an approach for the development of new theory. While the triangulation of the data sources varied from case to case, when observed it covered the key areas of (a) organizational and departmental design; (b) leadership; (c) buyer

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behavior; and (d) environmental outreach. In addition, data was obtained from several sources including observations, historical records, and websites.

Validity and Reliability

This study utilized four tests to prove validity and reliability of qualitative data.

1. *Construct validity*. Multiple cases and various disciplines participated in the study. Participants were instrumental in construct activities. Participants reviewed data collected.

2. *Internal validity*. Patterns and relationships were common among cases. Explanations for case actions were dependent on human or financial resources. Participants used standard internal sources for research and awareness.

3. *External validity*. Participants used standard and established external sources for research and awareness. Activities were visible outside of case surroundings. Activities involved external suppliers to support activities.

4. *Reliability*. Design, approach, model, and framework followed the works of Dyer and Wilkins (1991), Eisenhardt (1989), Eisenhardt and Graebner (2007), Harris and Crane (2002), Miles and Huberman (1994), Mintzberg (1979), Salkind (2000), Woodside and Wilson, (2003), and Yin (2009). Through citation references, these researchers have established credibility, transferability, dependability, trustworthiness, and confirmability in qualitative research and theory building.

These four tests are from the studies of Kidder and Judd (1986) and Yin (2009) and designed establish validity and reliability in qualitative case studies. Riege (2003) stated

tests to prove validity and reliability of qualitative data are essential to clarify data stability and quality, yet believed there are no specific tests for each phase of research. Singh (2014) stated Eisenhardt (1989) *Step 5* through *Step 8* added confidence to research findings and strengthening validity and reliability**.**

Ethical Considerations

The Belmont Report (1979), used to test for ethical behavior consists of three areas. *Respect for persons.* Consent forms, addressing constructs, and high-level opening questions were provided to each candidate. Also included in this form was purpose of the study, type and expected length of the interview, their rights to abstain from questions, knowledge of audio-taping, and mentor's contact information. Participant names and organizations were not identified in the study but coded in interview notes for any required follow-up. *Beneficence.* To ensure beneficence, this study scrutinizes the risks and benefits to participants to confirm and inform there is a balance. The consent form acknowledged that the participant was allowed to refuse to answer any question. Participants also reviewed the written transcript to make modifications if desired. Risk in this study in minimal. No additional risks than those experienced with typical on-the-job workday activities. With no personal data involved in the interview, the study poses minimal risk no greater than a participant would face during a typical day at work. Since the four constructs have not been analyzed in a university setting for EPP prior, the participants may benefit from the discussion gaining knowledge with the introduction and effects of the four constructs, and their relationships and impact on objectives. *Justice.* This principle requires researchers to select cases and participants that will contribute to the purpose of the study, not selecting cases that are convenient, known only through

affiliation, or easy to manipulate. Selected cases were recruited from a specially designed search through Google based on EPP activity available from their website.

Ethical interviews with participants begin with an open and honest introduction to the study, process, objectives, purpose, risks, and benefits. Included in ethical interaction the interview format included an eleven point recommended to demonstrate clarity, openness, honesty, and transparency.

1. Explain purpose

2. Identification of the researcher

3. Process

4. Length of process

5. Offer to refuse questions or terminate interview

6. Potential benefits of the study

7. Potential risks of the study

8. Information will be secured and held in confidence

9. Receive a copy of final results

10. Ability for the researcher to follow up if needed

11. A secure and comfortable place to meet

Salkind's (2000) eleven-point recommendation was successfully utilized for interview to establish a comfortable atmosphere. Participants demonstrated an intense interest in the interview process. Each participant did not use any words or display nonverbal communication suggesting an uncomfortable topic area or question.

To ensure confidentiality, data gathering and analysis was solely handled by researcher. All electronic information including recordings is stored on personally owned,

non-shared computers. Data identifying an organization was not shared with transcriber,

participating, or non-participating organizations or individuals involved or not involved

with the study.

CHAPTER 4. RESULTS

Introduction

Chapter 4 presents study data analysis with details addressing research questions directed from the four constructs. The purpose of this qualitative multiple case study was to explore behaviors, processes, and practices associated with four interdependent constructs in an attempt to understand and explain how they influence an environmentally preferred purchasing (EPP) program within a college setting. Four interdependent constructs are (a) organizational and department design; (b) leadership; (c) buyer behavior; and (d) environmental outreach.

Researcher has 23 years experience in a university purchasing department including some experience in initial develop of an EPP. Researcher has an active interest, education, and experience in organizational design and efficiency and believes EPP implementation, operations, and controlling is currently an unknown area available for further studies. Researcher is also an Adjunct Professor in business at University of New Haven (West Haven, CT.) and University of Connecticut (Storrs, CT.) teaching at the undergraduate and graduate levels.

Description of Sample

The sample consists of four accredited colleges located in the northeastern United States that practice EPP. Individuals solicited for the study focused on others in the organization with knowledge in current EPP processes, development, or concept. Group diversity offered value for the study. Participants were stakeholders from purchasing, sustainability, leadership, department manager, end-user, department buyer (decentralized), faculty, and student.

Research Methodology Applied to Data Analysis

Research methodology followed Eisenhardt (1989), Miles and Huberman (1994), and Yin (2009). Eisenhardt (1989) nine-step approach has been cited in over 28,000 scholarly documents for qualitative studies. This approach begins with developing a focus and concludes with closure. Supporting Eisenhardt (1989), Miles and Huberman (1994) writings to determine study closure and Yin (2009) components of research design was utilized. Writings from Eisenhardt, Miles and Huberman, and Yin are described in detail in Chapter 3, Research Design.

Presentation of Data and Results of Analysis

Data collected focused on the four constructs of (a) Organizational and Departmental Design; (b) Leadership; (c) Buyer Behavior; and (d) Environmental Outreach. Data obtained from the four constructs developed into 23 top-level concepts with most crossing multiple constructs. Table 4 depicts top level concept coding found in the constructs. Chapter 4 lists code with construct analysis demonstrating cross- construct relationships.

Table 4.

Top Level Concept and Cross-Construct Coding

Code	Top Level Concept	Case 1	Case 2	Case 3	Case 4
A	Awareness	X	X	X	X
B	Research / Information	X	X	X	X
C	Supplier Relations / Sales / *Greenwashing*	X		X	X
D	Behavior	X	X	X	X
E	Commitment	X	X		X
F	Stakeholder Agreement / Problem Resolution	X	X	X	
G	Projects / Programs	X	X	X	X
H	Purchasing Activities	X	X	X	X
I	Copy Paper	X			X
J	Recycling / Composting	X		X	X
K	Food / Drinking water			X	X
L	Energy / Reduce Carbon Footprint / Transportation	X		X	X
M	Employees Benefits	X			
N	Responsibility / Hierarchy	X	X		X
O	Staffing / Student Jobs	X	X		X
P	Experienced Manager	X			
Q	College Studies	X		X	

Table 4. Continued

Code	Top Level Concept	Case 1	Case 2	Case 3	Case 4
R	Funding / Budgets	X	X	X	
S	Standards / Policy / Procedures	X	X		
T	Reporting / Compliance / Safety			X	
U	Goals / Opportunities	X	X	X	
V	Interaction / Impact	X		X	
W	Social Involvement				X

Data and results of the analysis are listed for each research question by topic.

Organizational Design

Organizations are methodically designed to achieve a defined purpose through achieving goals using techniques that are efficient and effective. Arguably the purpose of a college is to educate students, with some colleges incorporating faculty research to advance knowledge in specialized fields. Educational and research functions require a support structure to handle administrative and physical needs. Based on the design concept, organizational design for a college considers three distinct, interrelated entities displayed in Figure 2: (a) academics; (b) research; and (c) administration.
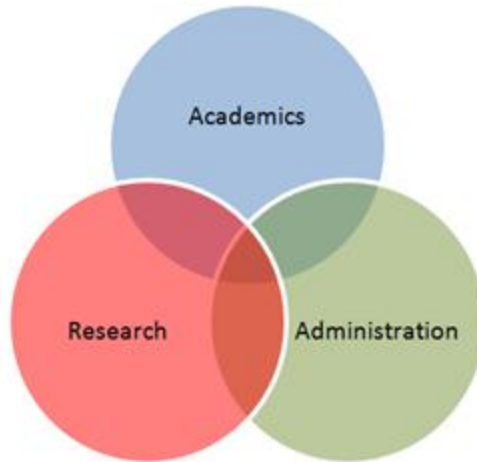
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Figure 2. College design overarching concept consisting of three unique functions

EPP is a support administrative function, but there are also buying needs through student coursework as part of their education where EPP can also be considered in the academics sphere. EPP designed as an active component in organizational structure enables colleges to obtain sustainable goods and services for effective academic, research, and administration needs. Design also allows for change and growth.

Dessein, Garicano, and Gertner, (2010) added that besides purpose, organizational design includes mechanisms that exhibit authority, provides goal incentives, and encourages resource synergy. Dessein et al., (2010) stated design creation take into consideration future internal and external environmental changes to allow for organizational flexibility and adaptation. Participants stated that implementation of EPP was viewed by leadership as an extension of current purchasing activities and therefore did not produce any major design adjustments. Current designs in all cases displayed authority, utilized established synergy, and allowed for growth and flexibility agreeing with the concepts of Dessein et al., (2010).

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Organizational design is a theoretical concept to utilize varied recourses to obtain goals that are impacted and influenced by multiple series of complex tasks (Osbert-Pociecha, 2013). For this study, organizational and departmental design encompasses tangible and non-tangible attributes that influence an organization's processes to obtain goals. Such tangible attributes include, but not limited to people, money, buildings, classrooms, computers, transportation, books, tools, heat, air conditioning, policies, security, and projects. Non-tangible attributes include, but not limited to leadership, hierarchy, information, skills, goals, behavior, awareness, commitment, compliance, culture, and social involvement. Organizational design is more than a physical structure. Effective organizational design is comprised of physical and non-physical elements all complementing and adding value to achieve organizational goals. Tangible and non-tangible elements that promote EPP awareness and program implementation are vital for design criteria.

Case participants explained multiple tasks to achieve various project goals from simplistic, involving low-cost office products to complex activities of capital projects. In all cases, organizational design allowed for internal and external resources to effectively interact obtaining awareness and valuable knowledge. This ability to utilize resources agrees with the beliefs of Osbert-Pociecha (2013).

EPP awareness and implementation. In all cases, participants stated that EPP's implementation by intent had minimal impact in overall organizational and purchasing department design. Leadership believed implementation would not be a major undertaking and employable in the current structure. After first becoming aware of sustainability efforts at various colleges, participant leadership began their analysis

within the internal environment in some degree of detail, placing a limited effort into an external analysis. The limited external environment effort was directed to human resources to hire a professional with a discipline in environmental studies. The objective of this position was to develop a sustainability program that touched various aspects of the college (B, D, E, G, N, O, P, R, U, & V).

With sustainability being a vast, dynamic, and complex subject, two participating leaders admitted they (i.e. leadership) lacked proper understanding and knowledge to begin designing a program effectively. Awareness can be considered simply as in understanding of a condition. Urban, Weinberg, and Hauser (1996) defined awareness as "a state of knowledge comparable to information obtained by searching one or more sources" and Henley (1984) defined awareness as "self-reports indicating that an observer consciously sees a stimulus" (A). Henley stated that there is an accepted relationship (e.g. stimulus) between a need for information and abilities to obtain accurate information through scholarly research sources (B). Participants believed that lack of initial sustainability awareness affected addressing critical issues. To help with the dilemma, leadership thought best to limit internal confusion and uncertainty by hiring a professional to handle all details. Analysis of the external environment mainly consisted of acquiring a professional with required education and skill-sets that fit the current culture and future vision of the college.

Staffing. Leadership quickly became aware that skill-sets to design and implement a quality EPP program were not available internally. Key participants stated their organization design required an experienced sustainable professional to evaluate, research, plan, and propose ideas to leadership regarding environmental programs and

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projects. One leader stated, "They (i.e. leadership) are not experts in this sustainability field so one was hired to implement a program" (G). Each case appeared to have adopted and executed this method, beginning with acquiring a professional as the first crucial decision to begin sustainability efforts. Leadership believed that an amateur would ineffectively handle the complexity of various sustainable activities. Leaders recognized definite advantages for an educated and experienced professional to develop, maintain, and eventually expand a sustainability program (P).

With the addition of a sustainability professional, organizational staffing in all cases showed very little or no growth in paid positions. In all cases, there was no increase in staff within purchasing. In one case, the sustainability department increased with one part-time staff paid position and a part-time paid student position. To assist with current sustainability tasks, most college resources came voluntarily from students, faculty, and staff. In some cases, student work efforts in the college was a required part of their curriculum. A leader quoted "this student – work arrangement is a living laboratory for environmental studies" adding practice to theory (O & Q).

An example of a standard high-level process for EPP idea to conception process obtained through interviews is represented in Figure 3 with the idea and concept acceptance begins the process. Preliminary ideas from cases were accredited to leadership and student. Ideas resulted in discussions with internal stakeholders followed by research of the internal and external environments to determine risks and benefits. Upon determining risks and benefits, the next step for each college was to hire a sustainability professional to work with purchasing professionals, leadership, and faculty to investigate

meaningful projects requiring minimal use of resources. Each college developed a pilot

program for a very particular project; each case being recycled content copy paper.
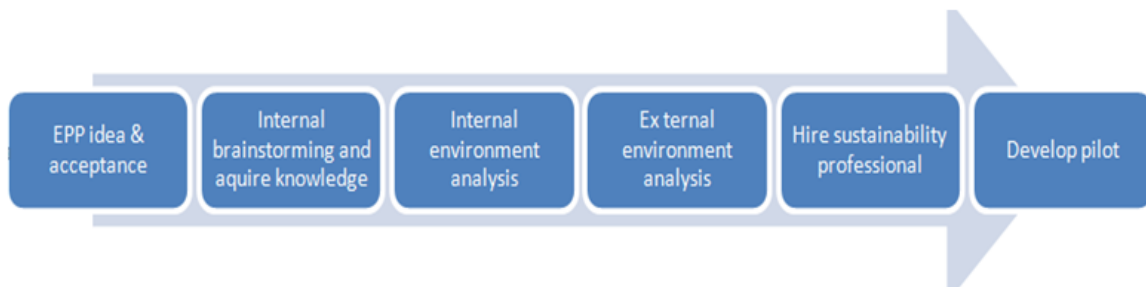

Figure 3. EPP idea to conception process

EPP pilot. New administrative programs are piloted with manageable and

measurable methods to test for gaps and any unknown issues in the entire process. All

case organizations piloted EPP with the same product, recycled content copy paper. At

one college, a student suggested the purchase and use of recycled content copy paper

campus-wide, even before the college recognized EPP as a program objective. Recycled

content copy paper concept from the other three colleges was first recommended by

professionals in purchasing or sustainability departments. Key stakeholders agreed

piloting copy paper as programs first product appeared to be a natural fit in current

organizational design (H & I).

A thought-out strategic plan to increase campus-wide awareness promotes success

to achieve sustainable goals and objectives through EPP pilot programs. In an effort to

test effectiveness of *green* supply-chain management awareness, Lee & Chen (2010)

applied the SWOT (Strengths, Weaknesses, Opportunities, and Threats) model to first

analyze organization's external environment for opportunities and threats, and followed

by an analysis of its internal environment for strengths and weaknesses towards goals (A

& U). The SWOT model tests for compatibility between all internal and external forces impacting goal achievement and identifies gaps and overlaps in resource utilization. Participants from all cases initially considered a diversified and broad EPP objective and admitted "an analysis of the external environment to align internal resources and operations with external dynamics was not fully conducted." In place of a detailed external analysis, each organization began by utilizing internal resources to hire a professional from the environmental discipline. Proposed in the new sustainability position were and continue to be responsibilities to plan, design, and present findings and suggestions to leadership. This position design proposal included procedures and policies supporting an EPP program and other sustainable projects (P). To establish synergy, each newly acquired sustainability professional from the four cases worked closely with the head of purchasing to design the mechanical structure to address purchasing and sustainable objectives with effective controls (U). As a result of this cooperative planned structure, systems, skill-sets and other human characteristics for program success were determined based on operational research and organizational needs (B). No case mentioned utilizing a SWOT or any other type of model to test for resource compatibility. Lack of model uses disagrees with beliefs of Lee and Chen (2010).

   Stakeholder involvement. Communication is a critical element that is formally implemented into organizational design. A well-planned organizational design looks to establish various communication channels that conveys and shares ideas and issues expeditiously in understandable terminology helping to identify and settle stakeholder issues (Chun-Yu, Yen-Chun, & Wen-Hsiung, 2013). Participants from all organizations confirmed communication channels at each college existed vertically and horizontally in

the hierarchy, designed to enhance the exchange of ideas and information for stakeholder knowledge (F). Figure 4 depicts communication technique used at the colleges for sustainability efforts. Note Figure 4 does not suggest organizational hierarchy or position responsibility. Communication mediums utilized were face-to-face, email, telephone, letter, fax, posting, demonstrations, meetings, and presentations that do not follow a set pattern.

Figure 4. Two- way communication

Organizational design looks to capitalize on the positive influence developed by stakeholder interaction and involvement (F & V). Stakeholders expect to receive accurate information in a timely manner. Stakeholders also expect to have capabilities to provide constructive feedback to responsible parties to develop a constructive dialog. Ideally, organizational designs include various communication methods and techniques to reach a full spectrum of stakeholder groups and allows for timely feedback (F). According to Harris and Crane (2002), communication can flow in any direction but only formal and authorized communication is based on the organizational hierarchy or job responsibility. Each case utilized existing or created new communication channels influenced by organizational culture to convey ideas to stakeholders and allowing for effective feedback. This model agrees with Chun-Yu et al., (2013).

Organizational member diversity naturally inherited in a college setting offers an

exceptional assortment of perspectives that can play distinctive roles in group

representation (Woehr, Arciniega, & Poling, 2013) (F). Group examples of personal

characteristics can be position, department, responsibility, experience, education, and

gender. Representative groups can also come from management levels, staff, faculty,

students, and Board members (F). For representation to be effective, proven

communication technology are designed to articulate adequately to key stakeholder

characteristics. A participating leader stated "each (diversified) group brings a very

important view of an issue, and all (group members) need to be heard." Along with

diversity involvement, diversity disagreement is natural and very probable. Not all

disagreement is bad, for it introduces new issues or concepts that are debated and

explored. Participants from each case confirmed "stakeholder agreement is usually

impossible to settle" because each or group views priorities through a different lens. An

example of indifference explained from all cases had to do with EPP funding. Students

with a strong commitment towards sustainability believe college funding for EPP efforts

have no limitations while leadership, faculty and staff argued about the best utilization of

limited organizational funds. Cases confirmed group disagreements in priorities,

projects, and organizational impact. This group behavior agrees with the research of

Woehr et al., (2013).

Hierarchy. Communication channels described by participants included such

mechanisms like email, newsletters, postings, and stakeholder meetings (N). Harris and

Crane (2002) stated that communication beginning at the executive or senior leadership

level that is delivered top-down throughout its entire organization has the most success

(A). Participants from all cases identified the existence of various formal communication techniques that are structured accordingly by the vertical structure of the hierarchy.

To maintain interactive organizational awareness, communication is a central part of the organizational design. The organizational hierarchy is typically used as a guide, but not as a requirement. The hierarchy can also be labeled as chain-of-command to indicate flow of communication from senior management through to non-management levels (N). A critical characteristic of communication design in an organization is to formulate a link in the chain-of-command that quickly identifies problems and opportunities and clearly communicates adjustments to responsible members minimizing loss or maximizing benefit (F, N & U).

The chain-of-command concept is the catalyst of the internal environment (Crumpton, 2013). Organizational hierarchy is a visual concept of blocks, vertical and horizontal levels with lines having little meaning other than direct and indirect reporting positions. The chain-of-command provides no clear understanding of goals, objectives, and duties (Hales & Rabey, 2011) (N). Before considering a change in hierarchy, an analysis of the external and internal environments identifies organizational inefficiencies to justify risk and benefit change. Resource inefficiencies are identified to determine proper tasks, skill sets, experience, education, physical characteristics, personal characteristics, and leadership qualities to address the reason for the change. The examination of internal requirements to address the inefficiencies will dictate if a change in hierarchy or adjustments in responsibilities are required. Figure 4 depicts communication flow expressed by participants in all cases. This design of

communication success expressed by participants disagrees with the research of Harris and Crane (2002).

According to Grant (2013), hierarchies can take one of two forms: centralized or decentralized. Hierarchy design is dependent on the dynamics of the external environment and intensity of internal bureaucracy and control. A centralized hierarchy is preferred when the external environment is stable, or there is a need for formidable internal control. A decentralized hierarchy is preferred when (a) external environment is dynamic; (b) little need for control mechanisms; (c) to reduce transaction costs; or (d) to reduce management resources (Robbins, 1990). Every case participant identified a "decentralized organizational hierarchy" as their organization's form of decision-making, communication, and behavior (N). Agreeing with Hart (1995), participants implied a decentralized structure enhanced EPP communication efforts among leadership, facility, staff, and students, resulting in diverse stakeholder commitment to program success.

Information significance. Accurate information from the research obtained from external environment is channeled and communicated internally to enhance EPP awareness (A & B) effectively. Communication in any form does not guarantee a full understanding of the intent of the communicator. For organizational operations to succeed, design is structured to communicate with the main stakeholders in its external environment, especially suppliers responsible for providing goods and services (Clark, Toms, & Green, 2014). Participants did not express any issues in communicating with external stakeholders, finding agreement with Clark et al., (2014).

Organizations depend on receiving open and honest information concerning goods and services purchased to understand the satisfaction of the end-users. Suppliers

survive and grow through customer sales, and there are times when not all information is provided to the customer by the seller. When there is an attempt to hide objectionable or negative facts concerning environmental context or use of the product or service, this action is called "*greenwashing*" (*Greenwashing* Index, 2014). One method explained by a purchasing director stated, "To minimize *greenwashing* information from sources the information obtained is discussed with other stakeholders of interest." Organizational design also allows information from selling companies to flow freely and uninterrupted to internal stakeholders, minimizing unnecessary steps required in the decision-making process (C & H).

All case participants identified suppliers as key providers of information and awareness. Buyers understand that the supplier's principal obligation is to sell, for without sales their organization cannot exist. Such a concept questions honesty and openness in strategic supplier relations. Laufer (2003) found that not all advertisements and supplier information was entirely truthful and open to customers (C). Supplier information to customers is naturally intentionally or unintentionally biased to appeal to customers' needs and expectations. This does not necessarily classify the action as *greenwashing* for the sales agent may also lack full awareness. When *greenwashing* is intentional, one participant stated "buyers or end-users are concerned by this sales tactic and, as a result, may be removed from approved supplier list." Though not experienced, each case confirmed levels of *greenwashing* exist, agreeing with the findings of Laufer (2003).

Organizational behavior. Heath and Sitkin (2001) defined organizational behavior as the study of individual and group behavior within an organization pertaining

to importance and impact of their work tasks. Influencing factors are typically thought of as only coming from the internal environment, but the external environment can also significantly influence individual and group behavior. Such external influences include economy, suppliers, transportation, weather, and geography.

Behavior is actions of workers addressing a stimulus regarding tasks, responsibilities, or work expectations. Information disbursed through communication mediums are deemed ineffective if member behavior does not demonstrate preferred change. Individual behavior and organizational behavior in the context of this study was found to have a direct impact on the ability to achieve environmental goals (D, U, & V). Claessens, Wendelien, Rutte, and Roe (2004) stated there are a direct link between planning (e.g. methodology for preferred) behavior and individual or group goal setting controlled by official organizational documents (e.g. policies, procedures, and guides) (S). Goals are established or sanctioned by top leadership and communicated down the organizational hierarchy to individuals handling smallest of tasks (N & U). Organizational and individual behavior is a coordinated effort in an organizational design also to include effective feedback from the lowest to the highest levels (D & N). Participants from all colleges stated "EPP behavior was not mandatory," disagreeing with the writings of Claessens et al., (2004) (B). Participants believed that the most effective method to change behavior is confrontation or peer pressure (V). A participant stated "influencing behavior was simply handled by stating and showing others the benefit of the action." To encourage preferred behavior, rewards, training, education, leadership, discipline, codes, policies and procedures were implemented into their design (B, S, & V).

Participants from all colleges believed that organized and proven tactics in organizational design were implemented to control behavior, though no single comment referred to any formal organizational behavior studies. Costs related to directing and controlling preferred EPP behavior was quite low, for most of the awareness was obtained through sharing of information internally, suppliers and professional organizations websites (A & B). Additional costs were related to professional training and seminars on environmental activities.

When considering behavior, organizational purpose and goals play a fundamental role in the level of commitment from organizational members (Cohen, 1999; Hildreth, Yeager, Miller, & Rabin, 2012) (E & U). During one interview, a participant stated that the "natural educational environment from this college is a perfect 'laboratory' with attending students demonstrating various forms of commitment that needs little encouragement" (Q). Other participants stated a similar viewpoint believing "students willingly get involved and volunteer time" to enhance college lifestyle or to add notable activities and achievements to their resume (E). Faculty and staff feel an obligation to participate, many with little encouragement. All cases directly and indirectly stated a strong level of commitment from organizational stakeholders. Program success tied to stakeholder commitment agrees with the views of Cohen (1999), and Hildreth et al., (2012).

Participant behavior regarding environmental activities took two forms: direct and indirect impact (V). Direct activities have a measurable and a visual effect on the organization and agreement among stakeholders (F). Direct activities included composting and recycling (J). Indirect impact included energy and carbon footprint that

have different understandings and viewpoints on impacting the environment. Energy included the use of electric cars, solar energy, and biofuel (L). Participants stated all projects implemented were deemed satisfactory in obtaining some level of success for their particular purpose (G).

Budgets and funding. Budgeting is an activity implemented in organizational design as a control mechanism to monitor expenditures and income. Hildreth et al., (2012) believed controlling spend is the foremost reason to create budgets. de Waal, Hermkens-Janssen, & van de Van (2011) presented four distinct advantages with traditional budgeting: (a) requires managers to plan and cost out realistic goals and assigning anticipated spend; (b) it promotes strategic and emergency planning, communication and agreement with other stakeholders in an effort to control and coordinate organizational activities; (c) it can be used to evaluate performance; and (d) it acts as a motivator for internal stakeholders to minimize costs while achieving objectives (E, P, & U). Even though de Waal et al., (2011) and Hildreth et al., (2012) theories were not discussed in such detail, all four advantages have significance to monitor EPP activities.

Since all organizations in this study first performed an internal analysis, early budgeting was based solely on the cost of the sustainability professional. Each sustainability professional was responsible for developing sustainable programs and with it; a budget to help determine cost – benefit ratio (P). Sustainability professionals interviewed stated they "work with several key stakeholders to obtain ideas and coordinate program efforts" (F). Key stakeholders were identified as purchasing, leadership, faculty, students, and suppliers. This relationship and dialog are continuous

throughout the fiscal year to maintain, improve, and explore new projects and new activities for programs (R).

Not all funding for environmental comes directly from the college. Colleges that support farms as part of their degree curriculum produce and meat are sold back to the college dining facilities for student, faculty, and staff consumption. This part of the budget was handled by dining services that were outsourced in two cases (C & R). Other aspects of funding came from government grants and private donations earmarked for sustainability activities. One college designates a fixed amount in tuition costs to contribute towards sustainability activities. This allows the college to establish a fixed line in the budget with a specified amount planned for environmental activities (R).

The purchasing controlled EPP program does have some products that require an increase in budget to comply with more expensive "*greener*" products. In one case, a participant stated "a percentage of supplier profits incurred by the purchase of specified non-*green* products were used to decrease the costs of *green* products," thus making the financial difference minimal. One participant stated students are not charged for printing on recycled copy paper, and it is unknown if the project is of benefit or being exploited by the students (R).

College environmental studies. All cases offer formal degrees directly or indirectly in environmental studies. A significant portion of the information obtained for awareness came from scholarly sources through student studies, hands-on student projects, or faculty research (A, B, & Q). Interviewed faculty and leadership also indicated that studies are not restricted to one discipline of environmental studies. To engage other students, organizational design intentionally divests to other educational

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courses, degrees, and disciplines directly or indirectly related. Additional disciplines include engineering, finance, agriculture, and management with the objective to introduce real world experience into aspects of the educational curriculum. As one participant stated, "a program designed by engineering would utilize finance students to determine financial feasibility." A design that shares in the objective contribution adds credibility to the college profile and directly adds real-world experience to a student's resume (Q).

Ravi, Shanker, and Tiwari (2005) believed that colleges are looked upon by society as having the responsibility to act as a responsible steward both socially and environmentally. External actions of colleges are typically designed to be favorable to all aspects of the external environment. Examples of the external environment include local geographical area, neighborhood, businesses, government, and suppliers. Social environmental programs and projects related to these actions are also a critical tactic to attract future students and keep current ones (G). No case revealed a direct connection to social behavior, but the researcher believes it is implied agreeing with Ravi et al., (2005).

Employee benefits. The final area of organizational design is one that is not typically associated with EPP, that being employee benefits. Organizational design enabled the college to expand acquired benefits to other aspects of the organization. The purchasing system allows employees to purchase goods (typically office supplies) from contract suppliers at college prices. This benefit enhances customer – supplier relations by increasing sales while ultimately giving the college more buying power to negotiate lower prices. More product purchases also speed up the product life cycle leading to possible higher quality products and same products at lower cost (M).

Conclusion. Organization design for purchasing in all cases was decentralized. Each case has a purchasing department head with a staff of between three and eleven. Hart (1995) stated a decentralized structure allows for communication flow in all directions for quick delivery to the recipient, efficiently addressing EPP activity awareness. Hart (1995) also stated that a decentralized structure enhances stakeholder approach for efficient and effective communication. Organizational design allowed internal stakeholders from leadership, facility, staff, and students to get involved in EPP program design, intensity, and growth, and monitor a preferred behavior. In each case, the decentralized structure worked to enhance communication, stakeholder involvement, and invite perceptions. This agrees with the theme presented by Hart (1995).

Faculty and employees have the authority to purchase low dollar goods and services without going through the purchasing department for approval with no need of a purchase order. Many of these purchases are completed within existing processes from strategic suppliers approved by purchasing. There is no special access to EPP only products and services. EPP processes are part of case purchasing systems with *"green"* information maintained at the product level detail. Purchasing department is responsible for systems design, function, maintenance, access, and participating suppliers.

Budgeting impacted initial EPP design and scope. Participants from all cases stated budgets had little flexibility for an EPP program utilizing internal resources to gain knowledge. All cases implemented a program fitting their structure and budget. All cases have a head of sustainability, but other than this position no additional managerial positions were created. Two cases increased in one clerical staff member. Leaders rely on organizational staff, faculty, and students to increase sustainability awareness and to stay

connected with the external environment. A major asset in design is academics involving environmental studies. Faculty and students influence leadership to be ahead of the sustainability curve, directly feeding back enhancing college academic programs.

Role of Leadership

Armandi, Oppedisano, and Sherman (2003) and Braynion (2004) define leadership as the relationship between leaders and followers to control organizational behavior. Cangemi, Burga, Lazarus, Miller, and Fitzgerald (2008) added that leaders define and share the mission, and convince stakeholders of a preferred direction to attain goals. It is characteristic for senior management to be leaders who establish goals, develop plans, and set the tone for organizational behavior and culture (Kippenberger, 1998).   Leadership is a complex function that requires knowledge of different leadership styles, approaches, and techniques dependent on goals, amount of resources, time, and type of organization. Higher education is known for their strong culture and culture influences organizational behavior. May, Susskind, and Shapiro (2013) identified a conflict between faculty culture and leadership culture that may present problems for change in organizational behavior. Leadership understands it cannot immediately change culture in a college setting. Awal, Klingler, Rongione, and Stumpf (2006) recommended that leadership work within confines of this strong culture in which to build a strategy (D, F, N, & U). Selected participants from all cases stated the culture heavily influence leadership responsibilities though none admitted it was a negative influence. It was stated as a *"fact of life."* Leadership in all cases is working within culture barriers to influence stakeholders towards objectives. This belief agrees with the theories of Awal et al., (2006).

When asked about the role of leadership, one leader responded with "Who is (really) leadership?" This response encouraged the researcher to reexamine the definition of "leader" in the context of this sustainability study. With sustainability an emerging field, more and more disciplines are becoming a vital part of its growth.   This raises the question if there is a "natural leader" in an emerging and dynamic field. Clarke (2012) stated that most literature on leadership is based on the vertical model, being top – down but found leadership can come from various levels. Clarke stated leadership is "one individual with the skills to find the right path and to motivate others to follow it." When the leader replied "Who is leadership," Clarke believed it can be anyone. Figure 5 represents participant statements indicating leadership influence can flow in any directions throughout the organizational hierarchy.
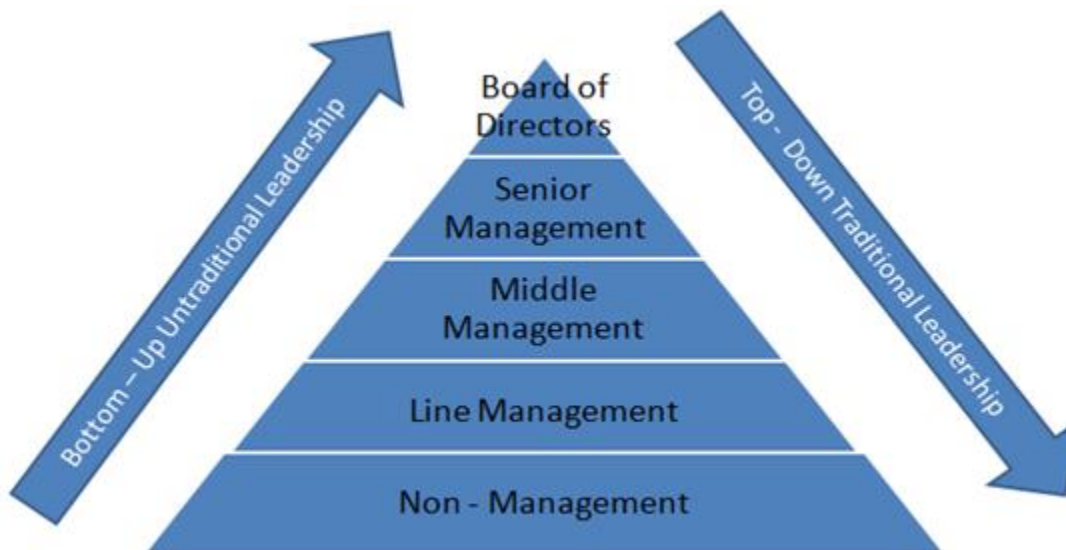

Figure 5. Leadership Flow of Influence

Communication. If leadership can be anyone, senior management wishing to use this concept to their advantage establishes communication channels that encourage ideas

for improvements. Even though Harris and Crane (2002) stated that communication has more success going top – down in the hierarchy, Rosendahl, Johan, and Revang (2014) noted direction is not required to be successful. Studies from Jagoda, Lonseth, and Lonseth (2013) found that bottom – up communication had greater success in productivity where stakeholders feel they are part of the decision-making process. It could be argued that a theoretical leader is not based on position or status in the organizational hierarchy. One example provided by a participant mentioned "a student was the first to discuss the use of recycled copy paper at the college." This student influenced leadership to change organizational behavior. Being responsible for all organizational behavior, leaders are instrumental in supporting sound and logical ideas established from the lower ranks. This leadership behavior supports findings by Drumwright (1994) and Yaghoubi, Mahallati, Moghadam, and Rahimi (2014). A leader can be at any level, for a leader is one that influences others to behave in a preferred method (Clarke, 2012) (D, F, N, & U).

　　　　Leadership in EPP. When case leadership felt the need to become a player in college sustainability activities, it was understood at all four colleges that an expert was required to develop and manage programs. Leaders from two colleges admitted "they were not the experts in environmental activities" and decided a professional be added to the administrative staff to take ownership. Zsolnai, Junghagen, and Tencati (2012) believed that management actions include sustainability commitment, socially responsible, work with diversity, share information, understand organizational culture, and solve problems in holistic manner. The sustainability professional position in all cases was minimally expected to establish goals, develop plans, create budgets, and

develop behavior and culture through awareness (A, D, F, G, H, N, O, R, S, & U). Literature review and participant interviews indicated a universal organizational commitment to sustainability from various organizational types exists. These findings agree with Zsolnai et al., (2012) position of commitment to sustainability and social responsibility.

Leaders work with objectives, and each objective is situational, based on the current impact of internal and external influences. For each situation, appropriate leadership skills are identified and matched (Clarke, 2012). EPP college awareness is nominal, with leaders initially taking a conservative approach using low-risk products with established skill sets. Improper skill sets will likely delay project progress, causing follower confusion, uncertainty, and mistrust (Banai & Tulimieri, 2013). Sustainability has been discussed for several decades and continues to grow in depth and topics testing leadership practices. In such an emerging and unstable environment, leaders are forced to experiment with various techniques to persuade followers of preferred behavior.

The role of the college leader is much deeper than establishing goals, developing plans, and setting organizational behavior and culture. One leader stated the role also "provides a framework, develops visions, encourages buy-in and makes decisions." Another leader expanded the list to include "review ideas, make recommendations, and determine how decisions impact academics." With flexible, growth, and vast sustainable projects available requiring detailed review, decisions concerning project selection and prioritization are typically very time-consuming and can be sensitive to stakeholder groups. One participant stated "it took time for leadership to develop their role in sustainability here in the college" confirming such a role is challenging, dynamic, and

multifaceted (B, D, F, G, N, & U). Complexity in leadership agrees with Awal et al., (2006) and in sustainability efforts with Zsolnai et al., (2012).

Leadership support and participation. Participants from purchasing and sustainability agreed that leadership support is critical to program success. Harris and Crane (2002) stated that EPP programs having notable and clear buy-in from leadership have a greater chance of accomplishing objectives then when attempted through middle or low management. Leaders interviewed realized that EPP programs have a positive effect on the image of the college and success is essential in attracting new student applicants, esteemed faculty, and dedicated employees willing to commit to a socially preferred workplace environment. This perspective agrees with Russo and Fouts (1997) (E, F, G, N, & U).

All participants affirmed their college possessed strong and supportive leadership concerning the various activities current or planned. Such support encourages dedication from followers. There are still times when followers need some added encouragement to support a project. Participants stated leadership support activities and will provide training, education, and forms of rewards individually or for groups if needed. This training concept is consistent with the writings of Smith and Rupp (2004) (D & G).

Participants from all colleges also passionately and quickly stated how proud and impressed they were with leadership's actions and commitment in sustainable activities. Participants indicated an undeniable trust and confidence in their leaders' ability to move forward on sustainable issues and opportunities. This supports the views of Meyer, Becker, and Vandenberghe (2004) and Sarros and Santora (2001) regarding the importance of trust in the leader – follower relationship (D, E, F, G, H, N, & U).

Participants also provided strong accolades for their president's dedication, commitment, and behavior with sustainability efforts. Presidential activities were unquestionably making their colleges role models for other colleges. A few examples of presidential activities included signing ACUPCC (American College & University President's Climate Commitment) in 2007, formed Endowment Council for Colleges, created volunteer programs for students, faculty, and staff, signing of Charter 7, and pledging to be carbon neutral by 2050. All participants stated that the dedication demonstrated by the president was clearly visible to internal and external stakeholders. Additional comments include president's who are "easy to talk to," leads in creating goals, and actively involved in awareness through ASHEE. This presidential behavior agrees with Cangemi et al., (2008) (A, B, D, E, F, G, H, N, R, & U).

Commitments to activities begin with awareness and expand with a focused growth of information. Fitzgerald (2007) stated that the combination of awareness and knowledge is one of the four successful leadership characteristics. Awareness and knowledge are required to earn the trust and confidence of followers accepting new work initiatives. A leader quoted, "each (diversified) group brings a very important view of an issue, and all need to be heard." Awareness and knowledge have little effect if not properly communicated using established, tested, and proven communication techniques in the hierarchy. Successful knowledge exchange is when there is a "meeting of the minds" throughout the hierarchy regardless of the direction. This growth in sustainable knowledge develops more possibilities of advancements in new areas. Edmonds (2011) found a need for leadership to develop a more effective infrastructure for the growth and success of sustainable programs on college campuses (A, D, F, N, & U). Participants'

statements suggested leadership success in creating an effective infrastructure for program growth and success, agreeing with the views of Edmonds (2011).

Stakeholder influence and organizational behavior. Kimiagari, Keivanpour, Mohiuddin, and Van Horne (2013) believed leadership considers all stakeholder groups in strategic decision-making. Edelenbos and Klijn (2005) found that project success is enhanced when leaders involve stakeholders in the decision-making process, but with an increase in diversity the timeline to come to an agreement on a project expands exponentially. It takes patience for leaders to obtain awareness from dependable sources, discuss risks and benefits with internal and external stakeholders, and understand the overall contribution to a sustainability mission before taking action (A, D, F, G, H, N, P, R, & U). Stakeholder involvement was consistent with the four cases allowing for greater interaction and exchange of ideas. This agrees with the models proposed by Edelenbos and Klijn (2006) and Kimiagari et al., (2013).

Leaders have various ways to control internal behavior; one method being the creation of policies, procedures, and standards. A participant admitted that there were few policies, mainly because of college culture. The researcher believes it is difficult to introduce control in an organization structured for free thinking. To help implement control in sustainability behavior, examples of limited specific policies were created to assist in room temperature, use of vehicles, water bottles, paper, climate, and to encourage EPP. Even with limited policies in place, admittedly preferred behavior is not mandatory, but through stakeholder commitment and peer pressure all participants stated the vast majority are following policies and procedures (D, E, F, G, H, N, & S). Lack of policies, procedures, and standards disagrees with the beliefs of Claessens et al., (2004).

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Words of encouragement by leadership to change stakeholder behavior are supported by personal actions. Freeman, Piece, and Dodd (2000) stated that leaders act by example, being both active and visible. Under the support of leadership, the four colleges have been active in creating a sustainability culture with such activities as (a) signing carbon neutral agreement by 2050; (b) signing American College & University President's Climate Commitment (ACUPCC); (c) supports formal guidance of AHEE; (d) began voluntary "ambassador" program; (e) commonly joins in college-wide activities; (f) participates as members on environmental committees; (g) works as a problem-solver for stakeholder agreement; and (h) reviews, approves, and dictates funding for programs and EPP activities (D, F, G, H, N, R, & U). Leadership actions at all four case agree with the concepts offered by Freeman et al., (2000).

Budgets and funding. All programs and projects require funding and many participants stated "funding is limited." Boards of Directors delegate leadership the responsibility and accountability of being fiscally responsible with income and use of funds. Competent skill sets to handle fiscal responsibility includes budgeting, accounting, auditing, control, governance, and oversight. One participant mentioned a "Budget Advisory Committee for sustainable purchases was created" for governance, and oversight. When there is an idea regarding a large investment project that has the long-term potential benefit to save money, leadership from one college participant stated that the rule-of-thumb used was an ROI of 5 years while another participant from another college was 10 years. During these tight economic times, one participant stated "costly projects are currently on hold" and another one stated that the "Board of Directors is not

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encouraging any major investments." Still key stakeholders are finding many low-cost projects that can be implemented (F, G, H, N, R, S, & U).

Different groups of stakeholders have differing perspectives when it comes to spending money on sustainability projects. Two participants admitted that clearest difference is between leadership and students. Leadership is responsible for developing and maintaining a realistic budget that governs operations, salaries, and academic programs. Budgets are prepared in pieces (e.g. job unit or program) and leadership puts the pieces together, analyzes, discusses and makes adjustments based on available of or anticipated funds. Priorities are established to determine use of the funds for the best overall interest of the college. When required, leaders can defend budgeting decisions to various stakeholder groups explaining decision reasoning and logic. Budget defense difficulty depends on the strength of the concerned stakeholder group. Participants stated "students prioritize differently." Many students believe that sustainability projects have a higher priority and thus not be sacrificed by other budgeting line items.   When asked "how is this resolved" it was stated that such disagreement are typically resolved when leadership presents a cost – benefit explanation defending budgeting decisions (D, F, G, H, N, R, & U).

Even the purchasing department played a role in departmental budgets. Costs of *green* products can cost much more than their non-*green* alternative. Because of EPP participation impact on smaller departments, they do not have the flexibility in their budget to purchase environmentally preferred products at a higher cost. One head of purchasing stated they had approached leadership explaining the departmental budget situation and defended EPP as more beneficial and in line with college vision. In many

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cases, the department budget was increased due to the efforts of the head of purchasing, quality of the EPP program and leadership commitment (H & R).

Academic and administrative environmental vision. Colleges prepare tomorrow's leaders with today's knowledge, grooming them for future careers. As part of that mission, Murphy and O'Brien (2014) believed college leaders will invest into more sustainability efforts in both academics and operational practice. For this to be embraced by stakeholders, leaders need to be creative in delivering their message so that it stands out from other activities. With increases in sustainability efforts growing worldwide, White (2009) found that leadership in colleges across the United States are changing the way they teach, research, and operate (B, D, G, N, & R). Leadership in all cases demonstrated organizational priorities for sustainable programs for academics and operational practice, agreeing with the concepts offered by Murphy and O'Brien (2014), and White (2009).

All cases have courses on sustainability, and two offer specialized degrees directly or indirectly in environmental studies. Students attending these colleges expect the college to be very active in sustainable activities with academia working with operations to develop programs that benefit students and the college. One leader called the college environment "a living laboratory" and strives to work with esteem faculty to be a model for protecting use of natural resources (A, B, E, G, O, Q, & U).

In two colleges, coursework implemented in college projects typically go beyond environmental studies. Leadership and faculty collaborate to get other school disciplines involved. Such disciplines as engineering, finance, agriculture, and management also participate adding to the college's reputation as a "living laboratory." A coordinated

effort is required to allow leadership to obtain needed resources for shared projects that include funding and communication, also determining preferred behavior by stakeholders (A, B, D, E, F, G, H, N, O, Q, R, & U).

Conclusion. Leadership sets boundaries, provides a vision, encourages ideas, make decisions in times of conflict, and supportive of college activities. Leadership in all cases made substantial commitments in areas of sustainability that directly attracts students and esteem faculty with an added benefit of being socially responsible. This is consistent with the concept proposed by Murphy and O'Brien (2014), stated leaders need to make formal commitments for colleges to achieve sustainability and Harris and Crane (2002) stated leadership buy-in impacts EPP success.

Leadership style is supportive (Cangemi et al., 2008) with colleges encouraging full internal stakeholder participation (Edelenbos & Klijn, 2006; Kimiagari et al., 2013). In their supportive nature, leadership was successful in building trust and earning confidence (Meyer et al., 2004; Sarros & Santora, 2001). All case participants provided high compliments to their perspective leadership. In two cases, activities of President's commitment are noted nationally.

Even though EPP was encouraged, there were no strict mandates or policies enforced. All cases focused on creating a sustainability culture that policed stakeholders. Participants in all cases stated this approach was successful, allowing peer pressure to influence behavior. All participants stated behavior could be better but feel most are willing to obey.

Leadership has the responsibility to establish budgets that often brings controversy. Faculty and students look to enhance education with state-of-the-art

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projects that can be costly. Leadership provides balance, knowing that faculty and students would like an "endless budget" while leadership focus' on financial stability. Differing responsibilities promotes conflicting views between leadership, faculty, and student stakeholders, adding complexity to academic vision.

Role of the buyer. Buyers, also known as Purchasing Agents are organizational members that connect suppliers and other aspects of the external environment to their organization (C & H). In this role, buyers have the responsibility to obtain requested goods and services that are known or understood to be safe and legal for organizational operations (B, C, H, & V). Such a responsibility requires product and service knowledge to go along with abilities to obtain relevant information to make rational purchasing decisions on behalf of the organization (A, B, F, & H). Neslin and Greenhalgh (1983) and Taube and Bryant (2010) stated that successful buyers have a working knowledge of assigned commodities and able to acquire information for negotiations when appropriate for particular situations (B, F, & H). Purchasing participants were very knowledgeable and confident within their responsibilities, agreeing with Neslin and Greenhalgh (1983) and Taube and Bryant (2010).

As the legal agent of the college and suppliers, buyers also are expected to monitor changes in their commodities that impact academics or operations (B). With sustainability expanding into many commodities, monitoring changes is complex and extremely time-consuming. Growth in sustainable actions promotes a natural growth in EPP at college organizations. Commodity changes can be simple improvements to current products and services or new entries into the market. Regardless of the complexity, organizational members expect buyers to become knowledgeable about

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green products and services introduced into the market while possessing appropriate skill-sets and ability to weigh organizational cost versus benefits (B).

Purchasing activities. Organizational purchasing activities are vast and diverse, exceeding the mechanical and technical aspects of task processing (H). Technical aspects include the ability to understand all the steps in the purchasing process, key responsibilities, control points, and user expectations. All purchasing participants identified software to create requisitions, purchase orders, and view on-line catalogs as major technical features of the purchasing process. Professional purchasing software has control points along with other features critical to financial and inventory control. Purchasing heads responsible for processes maintain system ownership ensuring policy, safeguards, accountability, and fiscal control.

Purchasing activities are visible, everyday, with some stakeholders seeing them as simple tasks. This mindset is common and overshadows the nobility deserved by the discipline. Msimangira (2003) stated that some leaders do not see purchasing as a justifiable profession and activities can be comfortably handled by end-user departments (H & T). In actuality, purchasing acts as financial and physical control points to manage expenses, inventory, and activities related to operational needs (Glock and Hochrein, 2011) (H & T). The complexity of purchasing activities includes (a) commodity knowledge; (b) contract law; and (c) skills in negotiating, researching, communication, and problem resolution. All participants provided appropriate respect for purchasing professional disagreeing with the perspective of Msimangira (2003) (H). A sampling of EPP complexity and influences is depicted in Figure 6.

Figure 6. Influences of EPP Activities

Awareness, research, knowledge, and information. All appropriate participants

provided similar research approaches to obtain information. All referred to the use of

known and trusted websites (e.g. STARS, EPA, ASHEE, colleges, and government) to

research and obtain reliable information to help make logical buying decisions. Sound research also identifies all forms of *greenwashing* whenever and wherever it exists. Two participants from two different colleges stated *greenwashing* is minimal or nonexistent, said to be out of respect to the college. The combinations of staff, students, and faculty typically are experts or have the knowledge and resources to obtain reliable information for a valid comparison. Foxall (1999) and Wei, Lee, Kou, and Wu (2014) stated that objectives of marketing *green* products are to convince buyers that such products are effective substitutes for traditional products (A, B, & C). Spoken or written promotional words may be skewed if even true, but information withheld by suppliers usually becomes known to the buyer or end-user. Purchasing participants stated that suppliers carefully provide product information with the understanding that college stakeholders are knowledgeable and resourceful in EPP. Organizational knowledge and awareness disagree with the marketing need for *greenwashing* as proposed by Foxall (1999), and Wei et al., (2014).

In a decentralized structure, employees with buying authority in all cases also used similar methods to acquire product and service awareness. All participants stated active, professional, and respected ties with the main suppliers to obtain reliable EPP information. When introducing new *green* products and services, buyers or end-users relied on honest sales presentations especially from strategic suppliers. Kaynak and Sert (2012) and Mohr and Spekman (1994) stated that a healthy business relationship is initially established by open and honest communication between a buyer and seller, with the longevity of the relationship examined and tested to confirm continuity and synergy. Key participants identified a trusting relationship is in the best interest of both buying and

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selling organizations. Buyers look to establish business relations with suppliers that meet such minimal qualifications as a good reputation, offer products or services that satisfy end-users at reasonable prices, financially sound, and supportive customer service. All purchasing participants stated a trusting environment exists with their strategic suppliers (A, B, C, D, & H). Heads of purchasing in all cases stated that communication and business behavior from strategic suppliers were one of trust, agreeing with the views of Kaynak and Sert (2012) and Mohr and Spekman (1994).

Before purchasing decisions can be reviewed and agreed to by end-uses, the goal of trained and experienced internal professionals is to be trusted as reliable resources to assist, guide, provide alternatives, and offer insight. In all cases, participants from purchasing and sustainability departments stated they are responsible for campus-wide awareness (A). To assist in awareness avenues, two of the four colleges maintained an intranet website for buying authorized EPP products from strategic suppliers.

Buyers work in a dynamic profession within ever-changing external and internal environments that minimally require a working knowledge of buying commodities and proven situational negotiating techniques (Michaels et al., 1987; Taube & Bryant, 2010) (B & H). Wolf (2005) stated that in some commodities, a simple working knowledge is not enough for a buyer to operate at a level of proficiency (B). The nature of a buyer's environment is complex, and such complexity in a dynamic environment makes it difficult to capture all behavior requirements in a formal job description (D & H). Various levels and complexity of tasks, responsibilities, and stakeholder influence adds role ambiguity, stress, and role conflict in day-to-day activities. Job complexity and inconsistency makes an accurate job description difficult to develop and vague to use to

monitor, assess, and judge buyer performance (Jackson & Schuler, 1985; Nygaard & Dahlstrom, 2002) (D & H). The working atmosphere for case buyers were found to be dynamic, due to changes and progress in sustainability growth and activities (B & H). This working environment agrees with the findings of Michaels et al., (1987), Taube and Bryant, (2010), and Wolf (2005).

Buyers also consistently work with conflicting objectives and confront stakeholders who have different views of professional, legal, and ethical behavior along with perspectives of importance (D & F). A critical aspect of buyer behavior is not only abilities to make logical decisions, but make decisions within legal and professional ethical standards (D & H). Many end-users do not have the full awareness of laws, ethics, and organizational policies impacting buying decisions. Because of this dynamic work environment with stakeholder interaction, buyers react to stimuli based on the situation and develop a response to resolve the conflict (D & H). Past solutions to problems are to be seen as a guide, but not recognized as a guaranteed solution to a similar problem due to the nature of the current set of influences (Rooney & Hopen, 2005) (D, F & H).

With the dynamics in purchasing, buyers can experience various types of problems in a typical business day (F). Purchasing depends on leadership support to carry out their mission, but there are occasions when leadership support is non-existent, intentional or unintentional. Communication skills, change management techniques, negotiating skills, and problem-solving methodology play a significant role in problem resolution (F). Internal departments may only see purchasing as experts in obtaining goods and services at excellent prices, superb quality, and with a fast delivery (H). Buyer responsibilities comprise of conflicting demands accompanied by role ambiguity, while

defending job function, ethics, laws, and contractual agreements (Michaels et al., 1987; Nygaard & Dahlstrom, 2002) (H). Purchasing participants admit that internal departments do not fully comprehend the complexity of the entire purchasing process, agreeing with the research of Michaels et al., (1987) and Nygaard and Dahlstrom (2002).

Some problems experienced stem from circumstances beyond buyer's responsibility and control. Goods or services controlled by law, regulations, or policy are problem areas purchasing cannot resolve, and if not accepted by the stakeholder, the issue escalates to leadership (H). Purchasing and sustainability departments often serve as communicators of such formal information to stakeholders (B & F). Buyers admit they are often recipients of frustration as they try to convince stakeholders the purpose of established controls (F & H).

Chadam and Pastuszak (2013) and Stump and Heide (1996) stated that the purchasing process does not end for the buyer when an order has been placed (H). Monitoring after purchase activities and requiring end-user feedback is very valuable information and beneficial in determining future buys (H). All participants stated their college did not have a formal purchasing feedback process in place to assist in end-user follow-up. All cases relied on simple communication methods such as phone calls or emails to obtain feedback on special purchases. Many *green* items purchased for the first time qualify as special purchases and constructive feedback helps purchasing, sustainability, suppliers, and manufacturers understand current assessment and develop plans for possible improvements. Unless overridden by policy, all participants agreed that buyers be allowed to discuss *green* substitutes with end-users that may satisfy the same need when within reasonable costs, quality, and environmental advantages. Even though

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formal feedback systems were lacking, purchasing participants stated after-purchase

activities of special *green* items were monitored, agreeing with the writings of Chadam

and Pastuszak (2013) and Stump and Heide (1996).

Participants from purchasing stated their organizational purchasing activities were

decentralized with various members of staff and faculty having authority to purchase

goods and services up to a specified spend limit dependent on the level of employee

responsibilities. Though not mandatory, staff and faculty are encouraged to use existing

purchasing processes from purchasing approved suppliers. Two colleges confirmed that

purchases over a specified amount are mandated by policy be on a legally binding

purchase order document created and approved by the purchasing department.

Purchasing participants indicated that they often discover opportunities by

monitoring the *green* movement in the external environment and encouraging suppliers to

be more active in stocking more environmentally friendly products. Early in the *green*

movement, suppliers did not want to invest in products that were not embraced by

customers. As *green* products increased in quality and prices declined, users began

purchasing such products expanding the growth of the EPP program.

The nature of a buyer – seller relationship is one of regular communication,

feedback, education, and negotiation (C & H). Leonidou (2005) found that buyers use

various communication and negotiating techniques to influence suppliers throughout

entire purchasing processes (C & H). Creativity to save money is not only restricted to

typical purchasing activities. Unique examples of savings programs successfully

negotiated by case heads of purchasing focused on suppliers cost of doing business. In

one example, by increasing minimum order amounts from $35 to $200, supplier's

internal costs were lowered. This action resulted in reductions in supplier's resources coupled with fewer transportation deliveries. Fewer transportation deliveries equate to a reduction in carbon footprint. In another example, supplier product costs included handling product returns. From cooperative actions between the supplier and purchasing, supplier provided a report on returns, and an effort was made to reduce. Returns reduced from 5% to 2%. The supplier passed obtained savings to the college to be utilized as a *fund* to help offset higher priced *green* products.

Key participants stated each purchasing situation presents unique facts, variables, and constants that are managed to address current influences. Participants from all cases noted difficulties in working with various stakeholders, with the buyer handling each situation distinctly depending on stakeholder position and organizational impact. Purchasing professionals understand that students are customers of the college, faculty is treated with respect, empathy, and kindness, and requests from leaders have great organizational importance. Each stakeholder involved in a purchasing situation regarding EPP, views are based on their commitment, personal experience, education, organizational benefit, and at times, what is best for their own career. This stakeholder behavior agrees with Delgado-ceballos, Aragón-correa, Ortiz-de-mandojana, and Rueda-manzanares, (2012).

There are other factors a buyer experiences when working with varied stakeholders. Besides cost and environmental benefit, other factors of concern include time to obtain product or service, quality, supplier customer service, support, and reputation (C & H). Each factor carries different weights to each stakeholder group (F). Faculty may want products or services the next day which may raise costs due to

expedited requirements. Staff may insist on a particular supplier regardless of cost as a result of sales presentation. Leadership may look to a supplier who is an alumnus. Buyers feel more comfortable and confident working with a reliable supplier and pressures to change the routine become problematic. Buyer participants admitted that internal stakeholder situations add complexity to the job often causing work-related stress. When there is not a situational agreement, leadership is asked to address the problem and develop a solution. Fortunately, all participants from all colleges agreed that bringing problems to leadership level rarely happens. Parties eventually come to a level of understanding followed by an acceptable agreement.

Due to the various perceptions, emotions, and power of key stakeholders, buyers need to transform their behavior to address each situation (D, F, H, & V). Purchasing staff is expected to work with all departments, managing and controlling all activities from the beginning of the purchasing process to the end (H). When there is a significant disagreement between stakeholders, all participants stated the issue is raised to leadership who is asked to make a final decision (F & H). Ndoda and Chaneta (2014) stated stakeholder arguments can be a political dilemma when leadership intervention is required (F). All participants agreed it was very rare for an issue to escalate up to leadership. No leader participant stated or hinted at organizational, political influence unlike the writings of Ndoda and Chaneta (2014).

The active and dynamic concept of sustainability is forcing external and internal change and college leadership firmly believed they needed to adapt to stay competitive and contribute to society. Existing heads of purchasing and sustainability at each college has successful track records in their discipline along with appropriate degrees in higher

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education and certifications that are beneficial naturally to promote a change in sustainable behavior (H). Job demands consisting of complicated tasks are dependent on stakeholder status. In two cases, heads of purchasing and sustainable stated that departmental members with buying authority have no formal training. Without professional and approved awareness, one participant stated "some purchases were not the best for sustainability." One case participant admitted that budgeting constraints prevented non-management from attending formal training in purchasing or sustainability activities. Participants stated that the lack of stakeholder awareness diminishes sustainability efforts.

Even with minimized formal awareness, key stakeholders established groups and committees from members of staff, faculty, students, and leadership to examine new products and services, weigh costs and benefits, brainstorm opportunities, and promote EPP. Projects that are inexpensive, visible, and have quick wins typically get priority. Buyers actively work with project chairs to research and review the external environment, filter out *greenwashing* and unnecessary information, uncover and concentrate on relevant facts, and use negotiating and contract expertise to help the project develop and achieve goals. For stakeholder involvement and input, all cases formed committees to focus on such specific areas such as (a) procurement; (b) energy; (c) recycling and waste; (d) transportation; (e) *green* buildings; (f) academics; (g) awareness; (h) food; (i) agriculture; (j) operations; (k) culture; and (l) local community involvement (G, H, J, K, L, Q, & V).

Buyers deal with many stakeholders during a regular business day (F). All participants discussed two factors concerning the argument between cost versus

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environmental benefit. Leadership, staff, and faculty understand the importance of budgeting to control funds and therefore cost is the most important factor (R). Students argue that environmental benefit be the deciding factor. Participants all admitted that most students change their position when the cost versus benefit factors are fully discussed and also how budgets impact tuition.

Organizational activities that are continuous and consistent require policies, procedures, and standards to control behavior. In regards to the purchasing process, activities begin with a need, contains approvals and financial controls, and end with the payment in full to the supplier (van Weele & Driedonks, 2010) (H). An example of a standard high-level process for purchasing activities obtained through interviews is represented in Figure 7. Figure 7 takes into consideration Chadam and Pastuszak (2013), Stump and Heide (1996) and van Weele and Driedonks (2010).

Step 1
•Need determined by end-user.

Step 2
•End-user reviews approved supplier list or completes purchase requisition.

Step 3a
•If low cost and available from an approved supplier, purchasing card is utilized.

Step 3b
•If requisition is created the form goes to Purchasing for review, research, and finalized with a purchase order.

Step 4
•Item is received or service is rendered.

Step 5
•If purchasing card was used, payment has been made. If a purchase order was used, supplier sends in invoice that is matched to the purchase order.

Step 6
•For a purchase order, payment is made to supplier when there is a match between purchase order details and invoice details.

Step 6
•Purchase follow-up to obtain end-user satifaction. Feedback if desired is sent back to the supplier.
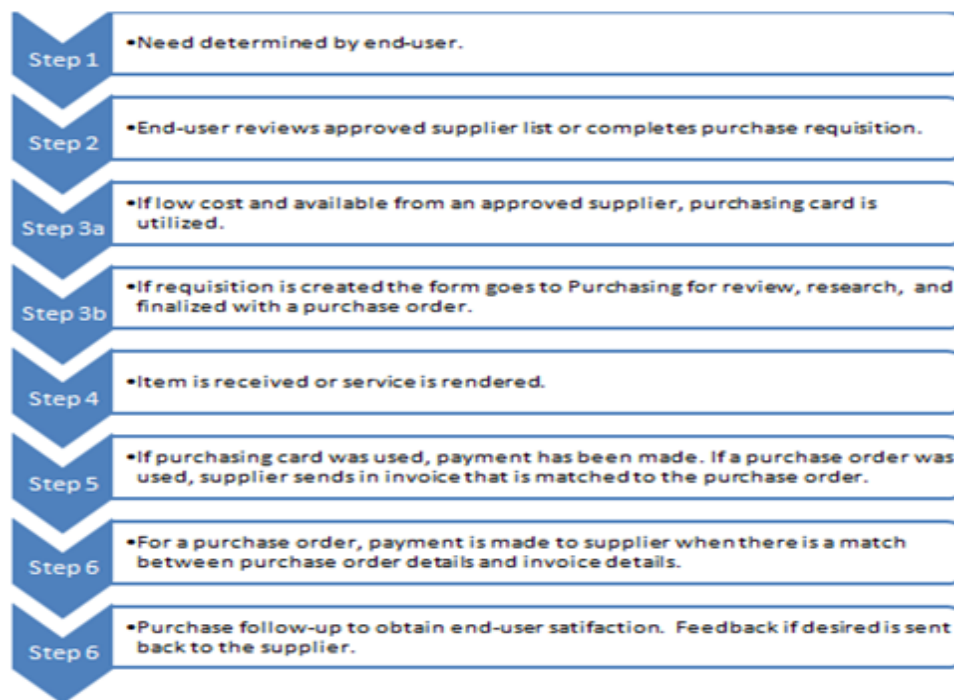
Figure 7. Purchasing process workflow from interviews.

Participants from two colleges identified the purchasing card (i.e. credit card) as the appropriate vehicle for low-dollar purchases with low-risk. High-risk or high-dollar purchases require a purchase order generated, reviewed, and approved by the purchasing department. As with purchase approval dollar limits controlled by the purchasing card system, members of the purchasing department have approval limits for purchase orders. Information from participants discussing control points in the purchasing process came indirectly through open-ended questioning. Other than purchasing card, requisition and purchase order controls, no other controls were discussed.

One college added wording to purchase orders to include reasonable treatment and wages to workers when products are obtained from foreign countries. This concept is seen as an extension of environmental consideration. Colleges are looking not only at products and services that are environmentally friendly, but also extending the concept to include social human concern. Suppliers agreeing to such wording comply with certifiable proof. Also of interest to the colleges are the sustainability efforts of the supplier and manufacturers.

As with financial and inventory controls embedded in the purchasing process, sustainable programs are monitored at critical and reliable places at particular times in order to check practice and current status to schedule, policy and procedure compliance, and to conform to personal and organizational safety (G & T). Establishing checkpoints at critical places and using reliable methods of measurement can impact process success or identify potential stages of loss. As illustrated in Figure 7, heads of purchasing understand process workflow and design control points when products are officially received and used by the requestor (H).

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Since the purchasing department is responsible for purchasing systems, the head of purchasing works with system creators and maintainers (e.g. IT) along with suppliers to develop accurate and meaningful reporting (C, H, & T). Colleges using a purchasing card method receive activity reports from banks or credit card companies, but other than amount, date, and card number, other details may be difficult to obtain. Purchasing card reports can list suppliers under a different company name, be located in a distant location, and have vague product descriptions. A control system maintained internally can be staffed to design reporting needs for better utilization and control enhancement.

Purchase orders are legally binding contracts and buyers as an agent of the organization have legal authority to add language to address other areas of concern (Davidson, Sebastian, & Borger, 2013). Other matters, such as compliance and safety are commonly added to purchase order language (T). Depending on the situation, costs to comply, and risk to the supplier or manufacturer, such language is highly scrutinized and typical vented through party's legal department. One college added wording to a purchase order requiring fair wages and humane treatment for goods purchased from foreign countries. Such requests may be difficult for the supplier to fulfill, but action from this college is on the cutting edge, developing and supporting a worldwide movement regarding humane efforts and incorporating it as part of a customer – supplier relationship. Actions by one head of purchasing to modify purchase orders follow the writings of Davidson et al., (2013).

EPP can be considered the program for environmentally concern purchases, and projects can be regarded as individual activities within the program (G). Sustainability and purchasing departments at all cases work in unison to enhance their EPP program by

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developing reasonable and achievable projects. Examples of high visible projects presented by participants include (a) supplier selection; (b) product promotion; (c) farm; (d) composting; (e) recycling; (f) local buying; (g) carpooling; (h) zip-cars; (i) electric carts; (j) diesel trucks; (k) alternative fuels; (l) business machines and computers; (m) sustainable construction; (n) stakeholder involvement (o) policy development; and (p) classroom interaction (C, G, H, J, K, L, & Q). All participants agreed that EPP and environmental awareness is a major undertaking, being time-consuming and utilizing many talented and committed resources. From conception, purchasing was assigned a critical role in the establishment and success of EPP. Leaders from all cases asked purchasing to introduce its first EPP good; all agreeing to recycled copy paper. Initial use of recycled copy paper created problems for copiers, but advancement in both paper and copier technology eventually eliminated original troubles. One case addressed the paper problem by buying all new, state-of-the-art printers (C, G, H, I & U).

Regardless of product or service sustainability, all participants agreed that prices that are competitive get serious consideration (R). Lim, Ting, Ng, Chin, and Boo (2013) and Meyer, Tertzakian, and Utterback (1997) stated that professional buyers understand the reason there are additional costs in new product introduction (A). These extra cost can be contributed to include product development, testing, and marketing (A). Cost of products may also include legal regulations covering product use or disposal (A). Prices of *green* products are typically initially higher, allowing manufacturers to recover some of these development costs (A). Once a product has matured, buyers manage *green* products as any other product in the same commodity (H).

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All participants interviewed placed a high importance of EPP and sustainable activities for college programs. When asked to rate their schools in sustainability efforts, the highest grade provided was a B+. All participants felt much more could be accomplished but they all agreed there is logical limitation on financial and human resources. As advancements in sustainability efforts continue to grow, participants believe they cannot keep up with all changes in the current design.

   The value of the purchasing department is determined by cost and quality of products and services obtainable, availability, and now adding sustainability concerns. In connecting to college's external environment, a critical skill set for a buyer is the ability to locate suppliers for needed goods and services. Buyers take the needs of internal stakeholders and researches suppliers who can satisfy critical requirements (B & C). Suppliers as external stakeholders present different problems to buyers as a natural part of the purchasing process. Influential factors could be cost, availability, quality, or after purchase support. When such problems arise, buyers use skilled negotiating techniques that are appropriate for the situation in an effort to come to a level of agreement (Neslin & Greenhalgh, 1983; Tu, 2012) (H). Examples provided by heads of purchasing demonstrate the use of negotiating techniques agreeing with the concepts of Neslin and Greenhalgh (1983) and Tu (2012).

After obtaining critical information from the supplier, buyers present negotiated factors to internal stakeholders for discussion, analysis, and the final decision (F & H). All purchasing participants stated such situations can be minimized when working with a well-established trusted supplier. Since all transactions affect future business, it is in the best interest of the supplier to satisfy the need of the college end-user and buyer. All

participants stated that they had a strong, reliable working relationship with strategic suppliers. The majority of the time, through active negotiations problems are identified, weighed, and understood as part of the purchase.

Communication is arguably the most critical instrumental in developing and maintaining good supplier relationships (C). Mohr and Spekman (1994) and Sáenz, Revilla, and Knoppen (2014) stated that communication simplifies problem resolution, builds trust, and promotes a positive business atmosphere (C, F & H). Suppliers need to sell products or services to stay in business, so customers believe some *green* presentations may not be 100% open and honest regardless of supplier relationship (C). Stakeholder awareness and involvement stated in each case tied with program success demonstrates agreement with the beliefs of Mohr and Spekman (1994) and Sáenz et al., (2014).

Green and Smith (2002) warned of counterfeit products entering the market when it is believed that quick sales can be made before being accurately identified (B, C & H). Several participants stated they had various dependable resources to identify *greenwashing* addressing the concepts Green and Smith (2002). With a high level of awareness within the organization, all participants stated *greenwashing* was minimal to nonexistent.

Besides acting as product experts, suppliers also encourage sales of new products using other methodology than standard product presentations (C & V). Examples to encourage sales may include additional free services such as product support and training (C & V). To promote sales of *green* office supplies, "one supplier gave products to

college offices to try for free and comment on its use." In some instances, products were refused without testing believing they were of lower quality.

Suppliers also understand that the cost of *green* products is comparable to non-*green* alternatives if they are going to sell (A, C, & R). All participants stated working within a budget is critical to financial responsibility therefore possibly impacting EPP involvement (R). Regardless of sustainability claims, product cost remains priority in college purchases (R). End-users believe they are getting their monies worth especially when *green* product cost is higher. Suppliers typically convince buyers that they are receiving much more than the physical product. Strategic suppliers may include other free services as (a) delivery; (b) support; (c) training; and (d) product exchange. When contemplating a purchase, buyers will typically take into consideration all direct and indirect benefits provided by the product and the supplier.

To enhance customer service, all purchasing participants stated their key suppliers had websites for buyers and end-users to view and shop for products and services. On-line ordering was preferred either through the supplier's website or the college interface. In one case, the supplier provided the only available reporting list of sales to purchasing. No internal reporting mechanisms were in place for stakeholder use. This supplier list would be used for monitoring items and contract negotiations.

All organizations started their EPP program with the same product, copy paper. This was seen as a simple project in which to jump-start the program. Two participants stated "it is best to start with low hanging fruit," meaning decided on projects requiring small funding, minimal resources, and is a quick and visible win. Having user departments purchase recycled copy paper instead of virgin copy paper was thought to be

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an easy goal to achieve, for it also had the full support of leadership. The beginning of the project resulted in many unforeseen problems. All cases understood to participate; recycled paper would cost more. User departments head naturally complained because budgets were not adjusted to account for the cost difference. Participants also stated that early use in product life cycle caused printer jamming. Three of the college participants addressed this problem by no longer encouraging the purchase of recycled paper until the paper manufacturers corrected the problem. One college purchased new copiers that would less likely jam. As paper quality matured, problems diminished and product cost became more in line and acceptable.

All participants stated that recycling is an active program on campus and within the control of the administration. Participants admitted that stakeholders usually obey, but not as frequent as expected. One participant stated that few individuals purposely did not follow recycling instructions in an event as a method of rebellion or dissatisfaction. It is unknown the actual meaning of the lack of participation. At one event leadership asked staff and faculty to stand at refuge container stations to handle the separation of food, plastic, and paper. Even with current efforts, participants from all colleges admitted that voluntary recycling on campus can be improved.

Colleges involved in agriculture established programs for composting (G & J). Bio-degradable organic material (e.g. plants, leaves, and grass clippings) are gathered from designated areas on campus and moved to designated areas to decompose. The result of the decomposition is used to fertilize the growth of produce on the college farm. This action saves colleges from buying environmentally preferred fertilizer from

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suppliers. Colleges with livestock also recycle food remains from the cafeteria to use as feed, saving cost to nourish animals.

Through the approval and support from leadership, participants from all colleges identified long-term college-wide strategic sustainable projects such as (a) carbon neutrality; (b) biomass energy plant; (c) solar panels; (d) participation in the nationwide challenges; (e) participation in the ACUPCC; (f) solid waste elimination; (g) attracting committed faculty with a proven track record; and (h) a strong curriculum (G, H, J, L, Q, & V). Being identified as strategic, organizations believed this would take multiple years to attain, require various types of resources with projects being under constant review, design, and modifications. One college participant stated long-term projects have an ROI of 5 years while another college participant stated ten years.

As organizations look to develop new opportunities and identify achievable and realistic goals, participants from all colleges recognize that funding current or future projects depend on the financial state of the college. To help offset sustainability projects, one college dedicates a percentage of tuition towards environmental activities. Another college established a particular fund dedicated towards environmental activities that accept donations on-line. Donations from external stakeholders are held in an individual account until a committee of internal stakeholders discusses and decide on its best use.

Sustainability projects also involve monitoring carbon footprint activities (L). Participants from two of the four colleges stated they had a program to buy products locally to reduce transportation efforts. One college hired a transportation service to make pick-ups from local farms for daily food purchases. Before this concept was introduced,

each farm transported their goods to the college several times a week. Daily transportation from each farm to the college was eliminated. Participants also stated that in many instances products were not available locally, forcing them to purchase outside the local area. Even though beef is available locally, food buyers found cost to be twice the amount of beef from the mid-west. In this case, it was decided that the cost of purchasing beef locally was not worth the extra cost.

Where energy is concerned, projects to reduce carbon footprint can come from areas that may be uncommon. One college contracted with a refuge company with scheduled pick-ups only when bulk trash containers are full. Each container contains a monitor that is observed at the supplier's location. Once the monitor indicates a full container, only then is a truck dispatched to pick up unload identified container. This unorthodox change in behavior resulted in fewer pick-ups per week, reducing costs and carbon footprint. All equipment for the trash container monitoring system was purchased and maintained by the contractor.

All four colleges have projects to reduce carbon footprint by updating transportation methods, using alternative energy, and encourage behavior change when using energy. Transportation and energy directly affect carbon footprint (Lin & Lin, 2014). Internal stakeholders created such projects as (a) purchase of higher MPG vehicles; (b) room sensors for lighting; (c) purchased electric carts for campus transportation; (d) carpooling; (e) converting buildings from oil to natural gas; (f) purchasing supplies locally; (g) placing purchase orders less frequently; (h) installing low energy light bulbs; (i) reducing deliveries per week; (j) third party local food pickup; (k)

installing "living" buildings (Living Building Challenge, 2015); and (l) upgrading

mechanisms using energy (C, G, H, L, & V).

Participants from all colleges admitted that the biggest challenge to reduce carbon

footprint is changing human behavior. Some students believe "lower cost energy means it

can be used at a greater volume." Another participant stated "students arrive at college

with their home behavior" and believing "energy consumption is based on a person's

lifestyle." Behavior change is not instantaneous but improves with active attempts to

properly place and properly time appropriate information and awareness.

Since purchasing is involved in various aspects of organizational expenses, at

times end-users bring-up budget constraints regarding specific purchases to buyers. At

one college, the head of purchasing actively works with leadership to speak for smaller

departments with limited budgets when there is a financial conflict in EPP participation.

In these situations, departments do not have funds to purchase environmentally preferred

products and, therefore, cannot faithfully participate in a sustainable program or adhere to

the policy. In many cases, purchasing department intervention convinced leadership that

importance of EPP and organization involvement as a whole needs full participation to

enhance behavior and demonstrate commitment. As a result of this intervention,

department budgets were increased to allow for individual EPP conditions.

When budgets restrict program compliance, both the end-user and purchasing

departments feel natural frustration. Frustration is usually not personal but stems from

department budget limits to purchase commodities. For organizational fiscal control,

departments are expected to remain under budget. Colleges with EPP programs puts

leadership in a dilemma; either allow higher priced products involved in EPP to be seen

as an organizational commitment or stick to budget constraints and be possibly criticized for not complying with College pledges and vision. Participants explained that leadership is typically supportive and sensitive when a situation has high visibility or a clear sustainable impact.

As part of budget restrictions, buyers play a role of working with suppliers and manufacturers to develop creative ways to make it a "win-win" proposition for all parties. Buyers and suppliers have developed innovative ideas such as (a) portions of supplier profits on non-*green* products are used to offset higher costs of *green* products; (b) supplier savings obtained through a reduction in product returns is used to offset other EPP; and (c) working with consortiums and E&I contracts to place pressure on manufacturers and suppliers. All buyers agreed that *green* goods and services are first within budget constraints before being seriously considered. Once the price is approved, the next step is to compare costs to benefits and address quality. Buyer's organizational responsibilities are broad, complex and dynamic. The addition of budget involvement is typically not recognized as a formal job responsibility in the purchasing discipline.

Food purchases have also become a viable project in EPP and sustainable efforts. As with other professional buying in a college, food purchases are no different in concept. Organizational food purchase responsibilities have been assigned to food specialists involved with college cafeterias and dining services. Participants from food purchases explaining their activities mimic EPP current ideas and processes. The EPP spectrum for food is currently limited, but college stakeholders have developed such projects as (a) local buying from farms; (b) energy efficient freezers for food storage; (c) third party pickups from local farms; (d) expansion of college farm; (e) outsourced dining

services; (f) composting; (g) elimination of bottled water; (h) using food scraps as animal feed or agriculture fertilizer; and (h) recycling (C, G, J, K, & L).

Each food project, process, and activity described demonstrated benefits sustainable efforts. Some efforts make an immediate impact such as (a) local buying from farms; (b) energy efficient freezers for food storage; (c) third party pickups from local farms; (d) composting; and (e) using food scraps as animal feed or agriculture fertilizer. The remaining efforts have long-term benefits such as (a) expansion of the college farm; (b) outsourced dining services; (c) elimination of bottled water; and (h) recycling. These projects are examples of a specific area of an organization (e.g. food) expanding on the concept of sustainability. Other excellent examples of projects from other specific areas were presented but not noted in this study because of the lack of connection to EPP.

By purpose and design, colleges are unique organizations that contain human resources that can provide professional services for sustainability projects at little to no extra costs. When such projects are directly related to coursework, students and faculty become that valued resource. Two of the four participating colleges have more vested sustainability interest academically then socially. They provided documented curriculum dedicated to supporting environmental studies. These two colleges confirmed a high concentration in various sustainability curriculum areas including focused degrees. As one participant stated, "students that attend here come to a living laboratory." This concept is expanded to other academic areas of the college where students from various disciplines get involved in sustainability projects as part of their coursework. One example provided included the agriculture discipline for objective, the engineering or environmental design discipline for ideas and to develop plans, finance discipline for

accounting and budgeting, and management discipline to monitor the project. These two colleges also utilized environmental projects for both college and local community into gradable course room assignments for students, combining theory with real-life discipline activities.

These in-house professional services directly impact the project work usually required from purchasing and sustainability departments. Research, interviews, and hiring tasks are removed from project action items. Significant savings come from services inherited in college studies that would naturally be required to be funded from external sources. Students in the appropriate studies get involved in such projects are guided and mentored by esteemed faculty and other students may get paid from a work-study program or volunteer their time being committed to the objective.

Conclusion. Having a decentralized organizational design, each college differed in staff headcount; from two to eleven. Purchasing heads of each college were found to be very well qualified, respected, and well-liked by internal stakeholders. These are positive characteristics for success in a decentralized structure, especially with limited policies and procedures enforced. Even though they are supported by leadership, each head handles day-to-day decisions through research, discussion, and at times negotiations agreeing with the views of Taube and Bryant (2010). Minimal leadership intervention is a tribute to their negotiation skills.

As with EPP, purchasing heads depend on compliance and peer pressure for preferred purchasing behavior. Internal stakeholders are encouraged to work within established systems where strategic suppliers are listed, pricing is monitored, and good customer service is embedded in the contract.

Purchasing looks to create strategic contracts with suppliers they can trust. All purchasing heads believe their strategic suppliers are trustworthy and supportive of college efforts. They are also looked upon as a resource for information regarding their products and services, especially for EPP. One purchasing head was very creative in working with a supplier concerning "making EPP products" more affordable. Such an agreement can only exist in a trusted relationship.

For EPP success, purchasing departments also looks to the sustainability department for advice and develop a good working relationship. All participants stated the relationship was stable and dependable. Neither department takes the lead in *green* products and services. They each monitor the external environment and involve the other before a supplier carries it or before a purchasing is made.

Environmental Movement

Budinsky and Bryant (2013) stated human activities are damaging natural resources and society as a whole needs to change behavior to protect resources for future availability and use. Several studies support a positive influence from customer pressure for organizations to adopt *green* purchasing policies and procedures (e.g. EPP) as part of the movement (Alvarez-Gil, Berrone, Husillo, & Lado, 2007). Society's concern for the environment looks to government, corporations, and higher education to invest in and expand sustainable activities and knowledge in order to protect natural recourses. Kim and Min (2011) stated that government play a greater role in environmental issues by introducing legislation that make organizations more accountable, developing measures, and mentoring (H & W). Participants only mentioned government through the implications of regulations and websites providing sources of awareness and information.

There was no direct evaluation, views, accuracy, or effectiveness connected with the role of government. Since government activity was not specifically in interview questioning, it is unknown if Kim and Min's (2011) beliefs are practiced and experienced.

Awareness. Basgöze and Tektas (2012) stated that awareness of sustainable products has shown tremendous grown over the last decade resulting in a greater demand for *green* products. Randheer, Abdulrahaman and Ruwaida (2014) believed that much of this awareness is a result of social pressure placed on government, corporations, and higher education to encourage more sustainability products and increase actions related to our environmental issues (A, B, C, D, H, I & W). Growth in sustainable products was indirectly mentioned by participants as they conveyed time element devoted towards sustainable practices. This is consistent with concepts proposed by Basgöze and Tektas (2012).

Meyer (2001) and Pillai (2013) believed that EPP begins with environmental awareness. Reports of growing environmental crises have increased EPP awareness in governments, suppliers, end-users, and all activities throughout the supply chain (Leire & Thidell, 2005). Awareness has spread to areas other than EPP of goods and services. Increase in awareness encouraged buyers to add weighing energy use and recycling ability into their purchasing decision (Basgöze & Tektas, 2012) (A, J, & W). This is now a regular practice in two of the colleges agreeing with Basgöze and Tektas (2012) research.

EPP and sustainability in colleges. Miemczyk et. al., (2012) believed the role of purchasing is to consider all activities in the product supply chain from raw materials to recycling in purchasing decisions (C, D, H, & W). Danciu (2013) stated EPP has gone

beyond the sustainability of the product and supply chain (C & H). Purchasing

departments have expanded the sustainability concept to fair wages and treatment of

workers when products are created from a foreign country (C, H, & W). This level of

detail adds to the quantity of information required to make a purchasing decision (B &

H). Key participants stated these expanded concepts are "expected to function within the

current set of purchasing activities' (H).

A successful purchasing activity includes the ability to convince internal

stakeholders to change their behavior to support EPP efforts and related activities (D &

H). Basgöze and Tektas (2012) stated that users of non - *green* products need to be

convinced that a change in behavior, attitude, accountability, and ownership is in the best

interest of the college. Participants from all four colleges possess strong and positive

attitudes towards sustainability, suggesting perceptions introduced by Basgöze and

Tektas (2012) is successfully managed. Leadership is also supportive and plays an active

role in behavior change. Yeoh and Paladino (2013) added that EPP support can come

from many internal and external areas. Influence of persuasive has collectively come

from the voices of students, faculty, staff, local community, government, and suppliers,

agreeing with the concept proposed by Yeoh and Paladino (2013) (A, D, E & O).

Behavior is not the only factor in participating in EPP (D, H, & G). do Paco and

Raposo (2009) combine environmental knowledge, attitude, and behavior into a

relationship of parallel importance. When shared using the four constructs as a model,

more flexibility in change behavior techniques become available. All participants

revealed several methods to increase awareness, communicate knowledge, and

administered processes to improve attitude and behavior. This is consistent with the views of do Paco and Raposo (2009) (A, B, & D).

All case participants interviewed utilized current structure and mechanics to address EPP purchasing activities (G & H). As with all commodities, buyers may call on experts to help with purchasing decisions (B & H). In the case of EPP, experts can be internally such as the sustainability department and faculty, or can be external being a colleague at another college. The introduction of EPP at all cases initially did not expand purchasing activities horizontally with new activities. EPP expanded vertically providing with alternative *green* products that required new areas of expertise (H).

A definite point presented by key participants from all cases is the price of goods and services through EPP. For EPP to succeed, price needs to be competitive with non-*green* alternatives. If the price is too high, *green* products will not be purchased. This concept expressed by participants is consistent with views of Basgöze and Tektas (2012), Codini, Saccani, and Sicco (2012), Essoussi and Linton (2010), and Pillai (2013) who agreed that price is the number one factor that influences EPP success (C & G).

As with goods and services, foods can utilize sustainable activities (K). Natural fertilizer such as organizational compost along with minimal water use is considered labeling the food organic (J & K). Because of the growing process, Grankvist and Biel (2001) found that organic foods cost more than nonorganic presenting higher costs into purchasing decisions. Basgöze and Tektas (2012) believed most people cannot afford the higher priced organic foods that are friendlier to the environment. Participants in the food discipline agreed with the findings of Basgöze and Tektas (2012) and Grankvist and Biel

(2001) commenting that the higher priced organic foods weigh into the purchasing decision.

Carrigan, Szmigin and Wright (2004) reported that organic food is also healthier because of the minimal use of chemicals and letting nature produce the food as designed (K). Carrigan et al., (2004) recommended that such consumers or budget preparers set aside 10% of their food budget for organic foods. Basgöze and Tektas (2012) believed that such action will be enough to bring the costs of organic foods down to a more competitive price (K). The researcher believes that the overarching concept of managing food sustainability was a similar model used in other EPP activities in EPP (H & K).

As part of the college curriculum, all cases offered formal degrees directly or indirectly in environmental studies (Q). Students not only contribute to EPP activities voluntarily with some paid jobs (O), but participants from two cases demonstrated a direct connection between classroom theory and physical practice in sustainable projects. As part of their college responsibility, esteem faculty take a leading role in bringing new ideas and concepts into coursework that not only teaches students current activities but also challenges them to increase college awareness and introduce new knowledge for future study (A, B, & Q).

Research and information. EPP is a very dynamic topic that continues to grow horizontally and vertically on products, services, and quality (A, C, & G). With colleges wanting to be *green*, stay *green*, and expand *green* projects (E), buyers have the responsibility to conduct effective research to become knowledgeable and educated to weigh alternatives (B) intelligently. Even though sustainability has been a topic of

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discussion for over 50 years, Miemczyk et al., (2012) argued that sustainability is still immature as a research field of study (A).

From various studies, Basgöze and Tekta (2012) revealed the web is the first choice to acquire *green* information (B). Conflicting information forces buyers to confirm which is appropriate for the buying condition and also to identify possible forms of *greenwashing* (C). Basgöze and Tektas (2012) agreed with Leire and Thidell, (2005) stating that buyers and end-users can become knowledgeable on purchasing choices from various research sources (B). Codini et al., (2012) agreed with Mills and Scleich (2010) stated that eco-labeling along with life-cycle cost has been successful in providing clear information for EPP purchasing decisions (B & H). With all the various information sources available through websites, colleagues and other colleges, information can create confusion (B). Laufer (2003) argued a need for EPP standardization in monitoring and reporting to help minimize the existence of conflicting information (B & G). The concepts proposed by Basgöze and Tektas (2012), Codini et al., (2012), Laufer (2003), Leire and Thidell (2005), and Mills and Scleich (2010), were all expressed at the four colleges.

Some EPP research now extends past the product to suppliers of the suppliers, considering the entire supply chain before a purchase decision is made (B & C). Constantinos, Constantine, and Neil (2013) stated growth in environmental awareness is forcing suppliers and others throughout the supply chain to employ additional sustainable information in their distribution of information (B & C). In taking all aspects of information into consideration, studies from Miemczyk et al., (2012) even found that sustainability for suppliers also incorporate two additional areas into the concept: ethical

corporate and social responsibility (B, C, & W). Purchasing participants stated they place pressure on suppliers to achieve greater objectives for business activities, buyer – seller relationships, and overall sustainability beliefs. This practice is consistent with the concept proposed by Constantinos et al., (2013).

All key participants agreed that conflicting information exists but are confident in sources they trust. Another consistent response was the use of the web as their first source of information (B). Two of the four colleges providing bachelor degrees in sustainability possess an internal wealth of knowledge (Q). Esteemed faculty and diligent students along with the expertise of the sustainability department provide high levels of sustainability information. Danciu (2013) identified that a real understanding of sustainability exists when specialist, researchers, community, scientists, and media act as partners and distribute information in a precise and scholarly method (B, N, & W). The nature of the college organization provides the internal resource of specialist, researchers, and scientists. These stakeholders are active from sustainability concepts to practice. This agrees with the belief of Danciu (2013).

Supplier responsibilities. Hamzaoui Essoussi and Linton (2010) and Pillai (2013) stated price is the most important consideration for purchasing decisions (C & H). Key participants agreed that price is the first topic to be consideration before talks continue. Codini et al., (2012) also agreed that price is of high importance and added use of energy consumption as another topic of importance (C). Basgöze and Tektas (2012) agreed on price criteria but believed needs, quality, and value are also important aspects to be considered even if the price is higher (C & H). With price being the number one factor, Danciu (2013) argued that manufacturers and suppliers absorb most of the added

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costs for the *green* product and transfer savings to the buyer. This perspective is controversial for it does not address the benefits for new entries into the market after proof-of-concept is deemed successful (Kinra and Antai, 2010) (C). Several participants from all case agreed price is the number one consideration, for it needs to be affordable before purchasing decision processes continue. This practice is consistent with the writings of Codini et al., (2012), Hamzaoui Essoussi and Linton (2010), and Pillai (2013).

Codini et al., (2012) informed that *green* price setting be established based on the perceived value the buyer is receiving. An analysis by Constantinos et al., (2013) found that suppliers and manufacturers of *green* products demonstrate significant returns on investment for their efforts. This raises the question of defending noticeable price differences between *green* and non-*green* alternatives. Since environmental concern is of *great* importance to customers, are suppliers and manufacturers taking advantage of human emotions to exploit profits (C)?

Budinsky and Bryant (2013) defined *Greenwashing* as "the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service" (C). Laufer (2003) found from a study of popular Fortune 500 companies *greenwashing* tactics used in their marketing scheme (C). College buyers stated they had firm "trust in their strategic suppliers for open and honest information" thus never considering *greenwashing* as a sales tactic (B, C, & H). One participant stated that suppliers understand the level of sustainability knowledge at the college and won't try to interject information into a dialog that can be considered greenwashing (B & C). The college organization with its valued resources is in a position

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to challenge what may be labeled as *greenwashing*. The lack of this behavior by suppliers disagrees with the views offered by Laufer (2003).

Miemczyk et al., (2012) stated that buyers are expanding supplier influence to include the sustainability of the supply chain (B & C). The supply chain begins at resources used to obtain raw materials, product use by the end-user and disposal. Krause, Vachon, and Klassen (2009) believed "a company is no more sustainable than the suppliers from which it sources." One participant stated that for some products that are competitive, buyers place pressure on the supplier to obtain information concerning sustainability of the supply chain (B & C). One head of purchasing participant stated that suppliers say they comply with the mandate but have no thorough way to verify compliance (C & H).

Energy, carbon footprint, and transportation. Blank and Storto (2013) reported Colleges are investing more into energy efficiency projects to offset high energy costs. Leadership sees these investments as methods to control spending, for with lower energy costs more capital can be focused towards infrastructure and rising tuition. Even with a possible ROI in the foreseeable future, colleges struggle to find the required up-front capital to fund major projects. Two participants from two cases are experiencing this financial situation, stating "all major sustainable projects are currently on hold" (G). Key participants at two colleges reported projects designed to address energy costs. This activity agrees with the research of Blank and Storto (2013).

Colleges who have signed American College and University Presidents' Climate Commitment (ACUPCC) committing to reach carbon neutrality by 2030 have found it difficult to measure current program success and looking to implement new projects with

a predictable ROI (G). Blank and Storto (2013) reported college use of a website designed to monitor carbon footprint, energy consumption, and financial savings obtained through a cost-savings project that can be used to substantiate significant sustainable projects. Green Revolving Investment Tracking System (2014) is currently used by 76 colleges that collectively were able to create 36 new funds totaling $111M between 2011 and 2012. The site also lists over 300 projects currently active that may be useful for college expansion (B).

Student contribution. College's possess a natural advocate of environmental activities; the student. Studies indicated that students are aware of environmental issues and have strong beliefs. The student is very likely to work a college job that pertains to the environment, such as recycling, farming, and program promotion (Randheer et al., 2014) (O). Swaim, Maloni, Napshin, and Henley (2014) reported that even though colleges are adding more courses in sustainability to increase ethical awareness (Q), studies show that when students become workers, sustainability efforts taught and practiced in college are not transferred to the employer. Participants presented various examples of student commitment to the college through willingness, education, and peer pressure (D). One element that may be missing in the workforce is peer pressure (Alvarez-Gil et al., 2007; Kim, 2005) (D & E).

Conclusion. All participants conveyed a strong commitment to EPP and college sustainable efforts. With each college having a different focus, no two colleges worked exactly the same way with the exception of using the Internet for research and awareness. Two colleges that had an academic interest in sustainability were more involved with capital projects enhancing current and future student interest. All colleges had an

established EPP program administered by the purchasing department, influenced by the sustainability department.

Randheer et al., (2014) believed much of environmental awareness is a result of social pressure and stated sustainable purchasing is respected of environmental, social, ethical and economic issues. All forms of EPP necessary to operate, maintain and manage organization's primary and support activities that provide value to the organization, society, and economy (Miemczyk et al., 2012). Participants reported direct linkage between leadership, faculty, students and staff with each group playing a role in college dynamics contributing to environmental goals and opportunities. Participants made no statements of "social pressure" as a factor to be sustainable, disagreeing with the perception offered by Randheer et al., (2014). The impression received by the researcher concerning their commitment towards sustainability activities comes from within the individual stakeholder. This concept is consistent with the writings presented by Miemczyk et al., (2012).

Participants did not discuss the reasoning being for or against environmental issues such as global warming. Interviews remained on topic, discussing how they handle EPP and sustainable activities within their college. All participants demonstrated pride in the fact that their college was taking on environmental accountability and striving to be a model college for sustainability activities.

Summary

An objective of the study was to identify relationships between activities and behavior regarding sustainability efforts at a college. Table 5 displays the relationships between top-level concepts and cases.

Table 5.

Top level concept, cross-case analysis

Code	Top Level Concept	Case 1	Case 2	Case 3	Case 4
A	Awareness	X	X	X	X
B	Research / Information	X	X	X	X
C	Supplier Relations / Sales / *Greenwashing*	X	X	X	X
D	Behavior	X	X	X	X
E	Commitment	X	X	X	X
F	Stakeholder Agreement / Problem Resolution	X	X	X	X
G	Projects / Programs	X	X	X	X
H	Purchasing Activities	X	X	X	X
I	Copy Paper	X	X	X	X
J	Recycling / Composting	X	X	X	X
L	Energy / Reduce Carbon Footprint / Transportation	X	X	X	X
M	Employees Benefits	X			
N	Responsibility / Hierarchy	X	X		
O	Staffing / Student Jobs	X	X	X	
P	Experienced Manager	X	X	X	X

Table 5. Continued.

Code	Top Level Concept	Case 1	Case 2	Case 3	Case 4
R	Funding / Budgets	X	X	X	X
S	Standards / Policy / Procedures	X	X	X	X
T	Reporting / Compliance / Safety	X	X	X	X
U	Goals / Opportunities	X	X	X	X
V	Interaction / Impact	X	X	X	X
W	Social Involvement		X	X	X

Of the 23 top-level concepts, 17 (73.9%) were common in all four cases, three were common in two cases (13.0%), two were common in one case (8.7%), and one only occurred in one case (4.3%). Four construct areas of (a) organizational and department design; (b) leadership; (c) buyer behavior; and (d) environmental outreach found that organizational and department design, leadership, and environmental outreach were common in all four cases. For purchasing activities, each organization was decentralized with a supportive leadership style for same environmental outreach opportunities.

Only remaining construct that differed from each organization is buyer behavior. College leaders set achievable sustainability goals matching overall organizational goals. Two colleges offered distinct degrees in sustainability efforts. Implementing sustainability programs in these two cases can be understood as an academic necessity for

organizational goals, college niche, and attraction of faculty and students. Even with specific degrees in sustainability efforts, the focus of each college was matching organizational goals, thus making buyer behavior in each case different.

Miemczyk et al., (2012) stated organizational EPP efforts provide value to the organization, society, and economy. Even though cases are colleges in New England (US) with a noted EPP goal focus, direct internal and external influences acquired are universal affecting EPP design, implementation, and day-to-day operations. Since no two organizations experience same internal and external influences, buyer behavior is one that matches organizational goals customized to address organizational EPP goals providing value to organization, society, and economy. Organization and department design along with leadership style are based on sound theories with decades of scholarly history. EPP is a moving target, changing with society, government, and customer pressure. Buyer behavior is a flexible field that adapts to internal and external influences on organizational or departmental goal success.

CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

Introduction to the Chapter

The purpose of this qualitative multiple case study was to explore behaviors, processes, and practices associated with four interdependent constructs in an attempt to understand and explain how they impact an environmentally preferred purchasing (EPP) program within a college setting. This chapter presents a summary of the results, and conclusion of the study concerning the impact identifiable influences affect the design, implementation, and day-to-day operations of an EPP program in a college setting. A detailed literature review identified four key constructs as (a) organizational and department design; (b) leadership; (c) buyer behavior; and (d) environmental outreach. The study of the four constructs included independent and dependent influences on EPP. With a focus on theory building the design, approach, model, and framework followed the works of Dyer and Wilkins (1991), Eisenhardt (1989), Eisenhardt and Graebner (2007), Harris and Crane (2002), Miles and Huberman (1994), Mintzberg (1979), Salkind (2000), Woodside and Wilson, (2003), and Yin (2009). Chapter 5 does summarize and discuss study results, implications, limitations, recommendations for further research, and conclusion.

Summary of the Results

Literary review led to four key constructs of (a) organizational and department design; (b) leadership; (c) buyer behavior; and (d) environmental outreach, and it were unknown if and how they affect EPP independently and dependently. Study results showed independent and dependent relationships having direct and indirect effects on EPP implementation and operations.

Leadership in all four cases decided EPP would operate within current organizational and department designs. With each schools program maturing and gaining strength, visibility, and obtaining various college benefits over several years, design and hierarchy have remained the same. For internal EPP awareness, purchasing and sustainability departments utilized current communication methods for organizational consistency.

In all four cases, leadership played a very supportive, visible, and active role in sustainability activities. Leadership involvement was both external with several national movements very visible among college and *green* interested organizations, and internally showing excitement, support, commitment, communication, involvement, and encouraging preferred behavior.

Leadership style was consistent with these four cases. This supportive style allowed purchasing and sustainability professionals to present feasible suggestions, develop programs, and act with minimal leadership direction and mandates. Leadership actions gave confidence to purchasing and sustainability professionals to connect the internal environment externally with EPP awareness.

No significant change in organizational and departmental design allowed for minimal adjustments in buyer behavior. Processes were established, and typical buyer activities were implemented within the current structure. This was a significant advantage for internal and external stakeholders not have to establish practices. As with different purchasable commodities, EPP activities have different weights to debate and analyze required more research in new areas than typical purchases and forced buyers to tap into new areas of typical buyer activities.

New areas of buyer activity revolved around EPP awareness influenced by sustainability dynamics. Buyers found few dependable standards, inconsistent information, *greenwashing*, various selling techniques due to product newness, and seller knowledge and experience. Sustainability dynamics also made it difficult for decision makers to triangulate data where few sources exist.

Each of these relationships was commonly impacted by financial resources and college project priorities. This supports Atherton & Giurco (2011) and Schlegelmilch, Bohlen, and Diamantopoulos (1996) position stating there is no standard way to implement, operate, and monitor an EPP program that will fit all organizations.

Colleges feel pressure from society to participate in environmentally preferred behavior (Harris & Crane, 2002; Kagawa, 2007; Min & Galle, 2001; Stephens, Hernandez, Roman, Graham & Scholz, 2008). EPP is an accepted program practiced globally by many types of organizations, thus becoming a practical program to implement. Even though all four cases demonstrated relationships between all constructs and utilized standard management techniques to research, analyze, and involve internal and external stakeholders, each college established different project priorities. Priorities were first based on funding, followed by "best" for college, college studies, national involvement as a model, and local community impact.

Discussion of the Results

Discussion of results is best to begin with an overarching similarity between cases; organizational culture. Culture in higher education is unlike a culture in a for-profit or not-for-profit business. Culture drives behavior (Awal et al., 2006; Kippenberger, 1998; May et al., 2013). Sussan, Ojie-Ahamiojie, & Kassira, (2008) stated that college

culture is heavily influenced by their customer, being the student, and by faculty who directly impacts such customers to achieve organizational goal of learning. Even though higher education has a goal and purpose like all organizations, it was found that culture heavily impacts (a) organizational and departmental design; (b) leadership; and (c) buyer behavior.

Results analyzed within-case and cross-case showed similar characteristics with differing levels of commitment and objectives. With each case being of higher education, participants theme to replies demonstrated same organizational type culture. Culture strength can be seen as a positive attribute, for change in organizational behavior does not begin with the tangible change itself, but begins with an analysis of culture's influence on the change.

Study confirmed relationships between all constructs. Not all relationships demonstrated same intensity, direction of influence, and stakeholder impact. Gains in EPP program were heavily influenced by stakeholder passion and commitment. Since no two organizations are alike in design and behavior, stakeholder passion varies based on the organization, the particular situation (e.g. program) and behavioral impact of stakeholder group.

Once stakeholder commitment was established, organizational and departmental design, leadership, buyer behavior, and EPP awareness constructs demonstrated cooperative research, awareness, discussion, analysis, decisions, implementation, monitoring techniques, and strategic planning. Key was utilizing effective communication modes, encouraging stakeholder participation, and establishing an atmosphere of confidence and trust in the concept.

With sustainability being globally accepted as a preferred way of life, organizational commitment from stakeholder groups was found to be attainable with simplistic efforts. No one stakeholder group was expected to be the initiator of sustainability projects for that is a shared responsibility. Acceptable ideas developed and were encouraged by leadership, faculty, students, staff, and suppliers.

Agricultural and capital projects were not expected to be presented in such great detail by participants. This turned out to benefit the study, for it took EPP out of the expected "recycled copy paper" concept and introduced total environmentally preferred behavior at a college that is globally supported. Even though EPP is typically connected with commonly used products with *green* alternatives, *green* capital projects are the result of many purchasing activities to achieve an environmentally preferred objective.

The four research questions were answered, for replies directly and indirectly addressed the ultimate goal of EPP. The U.S. Environmental Protection Agency (U.S. Environmental Protection Agency, EPP, 2010) not only defines EPP as purchasing related to goods and services, but also includes such activities as (a) building, construction, renovation, and demolition; (b) food services; (c) water use; (d) energy consumption; (e) renewable energy; (f) recycling waste; and (g) cleaning services. All above listed activities were directly or indirectly presented in each interview.

Discussion of the Conclusions in Relation to the Literature and the Field

Study found relationships between all four constructs at all four cases. All four cases demonstrated similar traits such as (a) culture type; (b) leadership style; (c) organizational design; (d) decentralized purchasing; (e) buyer behavior; (f) logic and process for hiring sustainability professional; (g) available of project funding; (h)

sustainability professional responsibilities and interaction purchasing; (i) stakeholder commitment; and (j) minimal EPP mandates. Dissimilar traits found were dependent on (a) methods of project funding; (b) "best" action for college external and internal visibility; (c) priorities influenced by stakeholders; (d) sustainability intensity; (e) strategic plans; (f) sustainability projects; and (g) supplier contract creativity.

Study found relationships between all four constructs as a group not found in the literature review. Individually, theories of organizational design, leadership, buyer behavior, and EPP awareness were utilized in all cases but lacking was knowledge of direct and indirect impact on all constructs EPP in a college setting. Scholarly writings were found in the four constructs individually, and connections between leaders and buyers, buyers and EPP, and leaders and EPP. With organizational design based on external environment influences, no writings were found for a structure to address EPP in any organization.

There continues to be disagreement on design type for a static versus dynamic external environment among researchers. A mechanistic - centralized structure is favored in a static environment, and organic - decentralized structure for a dynamic environment (Lichtenthaler, 2007; McCann et al., 2009; and Stahle & Hong, 2002). Purchasing activities in all organizations were decentralized indicating case external environment was dynamic. Purchasing structure, activities, and behavior remained consistent over several years suggesting a stable external environment. Participants stated many suppliers were labeled strategic with multi-year contracts in place. A dynamic external environment changes multiple times a year where multi-year contracts are impractical. EPP was one of the few purchasing areas that were dynamic with changes in product new

entries, product end-of-life cycle, quality, and competition happening several times a year. The significant amount of other purchasing commodities operates in a stable environment.

Writing found on leadership styles all agree on the focus is to control behavior. A supportive leadership style, one based on respect (Cangemi et al., 2008) was found in all organizations. A supportive leadership style added trust, openness, and stakeholder commitment to the design and operations of EPP. There was also no indication of leadership abuse of power (Cangemi, 2008; Miller, 2005, and Yukl, 2010), but was found quite the contrary. All participants conveyed the highest respect for leadership.

With buyer behavior being situational, literature focused on college buyers or buyers involved in EPP. Participants from the purchasing department were found to be very qualified in their situation at the college. Each came to his or her college with verifiable experience or worked through promotions to be head of purchasing. What was agreed was the ability to communicate and negotiate within the organization. Negotiating is often seen as an external activity (Tracey & Tan, 2001), not a requirement internally for program success. All organizations involved purchasing in strategic activities agreeing with Zhu et al., (2010).

EPP writings are dynamic because the field is dynamic. Colleges weigh the influences of EPP differently. Drumwright (1994) and Coggburn (2004) explain the changing influences from leadership, environmentalist, and other stakeholders. Participants conveyed the dynamics of EPP within their organization and how situations were addressed and monitored. Murray (2001) stated that *green* purchasing can lead to other benefits. Purchasing at one college used the dynamics of EPP to influence supplier

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negotiations for goods. Another college indicated the creation of a service in an urban area for high-risk youths to handle refurbishing of printer ink cartridges. All colleges demonstrated additional benefits that came through the work of stakeholders.

Limitations

Multiple limitations were found due to confining college population to the northeastern United States. Location was purposely in the design to allow for face-to-face interviews to obtain verbal communication and nonverbal observation. This limitation reduced number of available cases. Number of colleges and participants agreeing to this study met the minimum according to Crouch and McKenzie (2006) and Eisenhardt (1989). Even though key stakeholder disciplines participated, the minimal number of participants limited data collection per discipline. For example, only one student participated presenting a valuable perspective unique to all others. Each participant added value and something new to the data. Additional cases, participants, and disciplines may have developed additional relationships, constructs, and topics in their contribution based on views, priorities, and insights.

 With face-to-face interviews being the data collecting instrument, increasing geographical range would have added time and cost to complete data gathering. Face-to-face interviews allowed for nonverbal communication to be another form of data. Nonverbal communication was found to add more meaning to the spoken word, showing commitment, dedication, energy, excitement, dejection in project successes and failures.

In this initial study of the four constraints affecting EPP in a college setting, it is unknown if results would have differed if there were an ability to focus singly on (a) college type; (b) college size; (c) College location; or (d) participant group

representation. Examples of college types include private versus public or two-year

versus four years. College size examples include student enrollment over or fewer than

5,000, over 10,000, or over 25,000. College location would be geographical. Examples

include colleges in the East, West, North, South, or coastline. Examples of group

representation would be participants only from purchasing and sustainability

departments, only leaders, and only end-users.

Recommendations for Further Study

This study was conducted for colleges in northeastern United States and focused

on the interactions of four independent constructs. Of the four constructs, two are

constant for any organization: (a) Leadership and (b) Organizational Design. If this study

were to continue in the purchasing discipline (e.g. buyer behavior), then (c) Buyer

Behavior would also be a constant, leaving (d) Environmental Impact as the only

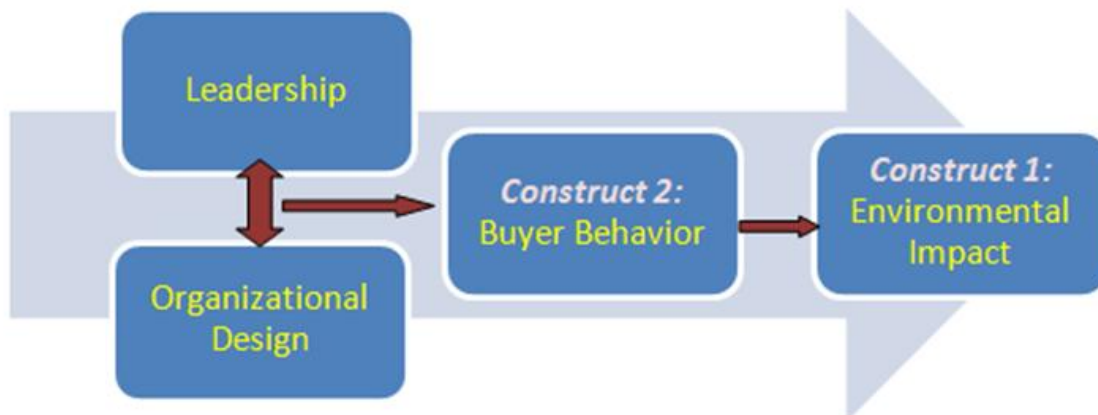construct, being focus of study. Figure 8 depicts a modular approach.

Figure 8. Modular tool for study

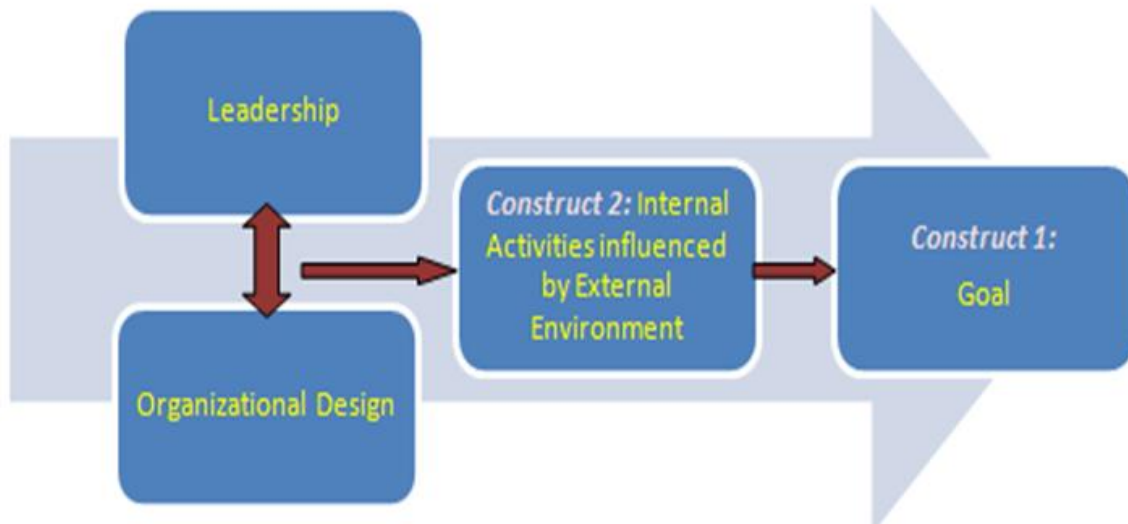Using this as a modular guide Figure 9 presents a general visual display.

Figure 9. Basic modular tool

Using this modular concept, future studies of similar intent can be limitless with the use of two constructs; (construct 2) internal activities influenced by the external environment intended to (construct 1) achieve a particular goal. Leadership and organizational design are constants for they exist in every organization. In this study, the goal (construct 1) was EPP and the internal activity influenced by the external environment (construct 2) was buyer behavior. If a future study were to include buyer behavior then the only new construct is the goal (construct 2). Construct 2 can be an influence of the buyer. Examples for construct 2 include commodity, supplier, geography, project, specific aspect of the external environment, or a particular aspect of the internal environment.

Keeping leadership, organizational design, and buyer behavior fixed constructs, college location is a variable. Since all organizations have leadership and organizational design, location can be worldwide. Another construct is the type of organization. This

study focused on colleges. Other examples of organizations include government, for-profit, good producers, and services. Each of these can also be segmented by type organization such as the automotive industry, hospital services, small business, and unique business.

Within construct 1 of environmental impact, construct two ideas include board of directors, customer (end-user), organizational culture, and transportation. Construct 1 can be specified to energy (e.g. solar, oil, diesel, gasoline, natural gas, and wind), energy production, and foods (e.g. fruits and vegetables, meats, and fish). Construct 1 makes future studies limitless. Goal can be an organizational, departmental, group, or culture. Additional aspects include financial, sales, downsizing, expansion, time, or an important event.

Recommendation for study design is to be more focused. As indicated in examples of use with Figure 9, focus can come in construct 1 or 2, or both 1 and 2. Focus also produces a finite study, using less literature and time to complete. When compared to a study with broad research questions, a more focused study is expected to reach literature and analysis saturation earlier. Of the four constructs used in this study, only organizational design had limited focus. Even with colleges, examples of a more finite focus includes (a) 4 year colleges; (b) 2 year colleges; (c) technical colleges; (d) discipline colleges; (e) Ivy League; and (f) international colleges.

A final area of future study revolves around college culture. Direct and indirect influences of existing culture suggest that management can develop a model for behavior change. May et al., (2013) explained culture issues at colleges and recommended methods to handle. With each organization unique in its college culture, a model can be

developed to assist through organizational change. Since behavior is situational based affecting stakeholders differently per set of influences, development of a model would require known variables per situation type. Overarching function of the model would be to utilize known "cause and effect" to reduce variables and alternatives, and employ an established practice unique to the organization to guide decision-making.

Conclusion

Answers to research questions for this study are consistent in (a) organizational and departmental design; (b) leadership; and (d) environmental impact. Organizational and departmental design is decentralized, leadership style is supportive, and environmental awareness is the same dynamics in all cases. Leadership in each college chooses aspects of environmental awareness that fit organizational goals and objectives. Least consistent answer for research questions is buyer behavior. Buyer behavior is situational agreeing with Braglia and Petroni (2000) and Watts et al., (1995). All four areas agree with findings in the literature review. Literary review and research findings agree that advances in EPP will continue to grow.

Individually, constructs of organization design, leadership, and buyer behavior have been studied for decades. Within identified situations, studies exist about the relationship between organization design and leadership, leadership and buyer, leadership and EPP, and organization design and buyer. This study introduces relationships between all four constructs research.

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APPENDIX A. STATEMENT OF ORIGINAL WORK

Academic Honesty Policy

Capella University's Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person's ideas or works.

The following standards for original work and definition of *plagiarism* are discussed in the Policy:

> Learners are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another learner's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)

> Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. (p. 2)

Capella University's Research Misconduct Policy (3.03.06) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

> Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously deviate from those that are commonly accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)
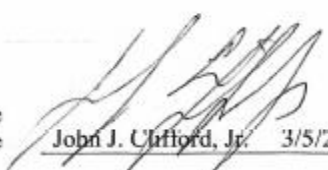
Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.

Statement of Original Work and Signature

I have read, understood, and abided by Capella University's Academic Honesty Policy (3.01.01) and Research Misconduct Policy (3.03.06), including the Policy Statements, Rationale, and Definitions.

I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the APA *Publication Manual*.

Learner name and date	John J. Clifford, Jr. 3/5/2015
Mentor name and school	John Latham, PhD Capella University

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John J. Clifford, Jr.
Interview Guide

Study Title: ORGANIZATIONAL FACTORS THAT AFFECT
ENVIRONMENTALLY PREFERRED PURCHASING: A QUALITATIVE STUDY OF
FOUR UNIVERSITIES

Interview questions will cover four areas. The following questions will lead into specific
details of the area.

1- <u>Organization and Department Design</u>

1.   What research did you do regarding EPP prior to developing
your own program (e.g. organizations, books, articles,
benchmarks, processes, NAEP, AASHE, etc)?

2.   How did you design the EPP program? What were the key
steps (e.g. mimicking a best practice model, development of
policies, procedures, etc)?

3.   Who was involved in the design? What internal and external
positions or skill sets were involved and what were their roles
(e.g. internal sustainability department, external consultants,
vendors, etc)?

4.   How would you describe the culture of the organization?
How has it impacted the implementation of the EPP?

5.   What do user departments expect from the purchasing
department when "green" products or services are
requested?

6.   Was an awareness program initiated?

7.   How are the customers (end-users) accepting the policies,
procedures, practices, and "green" culture associated with the
EPP program?

8.   What recommendations do you have for other universities
starting an EPP program?

2- <u>Leadership Role</u>

9. What was leadership's role in the design and implementation of the EPP?
   a. Who is considered leadership?
   b. Was leadership involved in setting and measuring qualitative and quantitative goals?

10. How did senior leaders help facilitate the implementation of the EPP?
   a. Was the program an operational in-grown initiative or a leadership mandate?
   b. Did leadership play an active role on the front-line?

11. How are stakeholder conflicts handled? Can you give me an example of a situation where leadership had to step in and resolve the issue?

3 - <u>Buyer Behavior</u>

12. How have the purchasing buyer's roles and responsibilities changed with the implementation of the EPP?
   a. What specialized training was recommended?

13. How does the sustainability department interact or influence the buyers purchasing decision?

14. How do you obtain the information necessary to make a purchase decision for a new product or service?
   a. How to you identify "noise," "*greenwashing*," and "exaggeration?"

4 - <u>Environmental Outreach</u>

15. What products and services qualify as an item in your EPP program?
   a. Do you have a core group of products and services?

16. How do you compare green vs. non-green products?
   a. Define green products and services.

17. How would you rate your program?
   a. Against your own goals.
   b. Against other standards.

18.   What are the next steps to improve or expand the program?