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It Is Time the United States Air Force Changes the Way it Feeds Its Airmen. Six University's Perspectives on Outsourcing

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IT IS TIME THE UNITED STATES AIR FORCE CHANGES THE WAY IT FEEDS ITS AIRMEN

THESIS

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Abstract

Air Force dining facility operations are stressed as a result of PBD 720 driven military force reductions, loss of personnel due to deployments, and the reduced availability of appropriated funds for mess attendant contracts, equipment replacement and facility maintenance and repair. "New, innovative methods of operating, funding and manning are needed in order to ensure our dining facilities are able to execute their mission of feeding and serving America's Airmen" (Halverson, 2006).

This research examines outsourcing's potential as an innovative method to combat the problems facing dining facilities. The feeding models of six universities, which included self-operated, co-sourced, and fully outsourced operations, were used as benchmarks.

From these feeding models, the characteristics important to outsourcing decisions were determined. Comparative analysis of the characteristics of the Air Force feeding model and those of the benchmark universities revealed similarity to Kent State University. The fit of the co-sourced feeding model at Kent State suggests that the Air Force would benefit from a similar co-sourced feeding model in its dining facility operations.

Mother-In-Law

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Troy J. Miller

Table of Contents

Page
Abstract iv
Acknowledgments vi
Table of Contents vii
List of Figures ix
List of Tables x
Background, Motivation, and Problem Statement 1
Research Objectives 2
Research Question 3
Investigative Questions 3
Hypothesis 4
Research Focus 4
Theoretical Lens 4
Methodology 5
Assumptions 6
Implications 6
Literature Review 7
Chapter Overview 7
Historical perspective of how the USAF provided meals to its Airmen 7
Army, Navy and Marines also faced changes within their food service operations 9
Demographic similarities between University Students and Air Force Airmen 10
An examination of the "Make/Buy" outsource decision process 15
Strategic Change Management 23
AFSO21 and Lean Thinking 25
Summary 26
Methodology 27
Chapter Overview 27
Research Design 27
Qualitative Method 29
Research Question 31
Investigative Questions 31
Case Study Methodology 32
Validity and Reliability 34
Case Study Protocol 35
Investigative Question #1 36
Investigative Question #2 37
Investigative Question #3 37
Investigative Question #4 38
Investigative Question #5 38
Investigative Question #6 39
Data Collection 39
1. Locating Sites & Individuals 41
2. Gaining Access & Making Rapport 42

3. Purposeful Sampling 42
4. Collecting Data 42
5. Recording Information 43
6. Resolving Field Issues 43
7. Storing Data 43
Units of Analysis 43
Summary 45
Analysis and Results 46
Chapter Overview 46
Investigative Question #1 46
Investigative Question #2 51
Investigative Question #3 53
Investigative Question #4 56
Investigative Question #5 60
Investigative Question #6 62
Research Findings 65
Summary 68
Conclusions 69
Overview 69
Relevance 69
Roles and Responsibilities 69
Addressing the Hypothesis 69
Addressing the Research Question 70
Recommendations 71
Research Limitations and Bias 72
1. Limitation of Sample Size 72
2. University/college Bias 73
3. Researcher Bias 73
Future Research 73
Appendix A 75
Appendix B (University Interview Questions) 76
Appendix C 77
Appendix D (Air Force Interview Questions) 78
Bibliography 79
Vita 81

List of Figures

Figure 1. Outsourcing Relationships 19

Figure 2. Supplier Relationships.....20

Figure 3. Risk Levels in Outsourcing Relationships.....21

Figure 4. Business Objectives and Risks of Outsourcing Engagements.....23

Figure 5. Convergence of Multiple Sources of Evidence.....40

Figure 6. Data Collection Activities.....41

Figure 7. Intensity Level of Importance (overall operating cost criterion).....54

Figure 8. Intensity Level of Importance (quality of dining experience criterion).....55

Figure 9. Intensity Level of Importance (skill of workers and managers criterion).....56

Figure 14. Venn diagram (Air Force and University/College shared characteristics)...68

Figure 15. Recommended Decision.....72

List of Tables

Table 1. United States Air Force 2008 Age Demographics.....11

Table 2. University Student's Demographics.....12

Table 3. Four categories/13 rated criteria.....15

Table 4. Research Method Procedures.....29

Table 5. Units of Analysis & Categorization of Data Collected.....44

Table 6. Ranked College Feeding Models Matrix 47

Table 7. Air Force Feeding Model Matrix.....51

Table 8. Air Force and University factors similarities.....63

IT IS TIME THE UNITED STATES AIR FORCE CHANGES THE WAY IT FEEDS ITS AIRMEN

I. Background, Motivation, and Problem Statement

In the United States Air Force, dining facilities are stressed world wide as a result of PBD 720 driven military force reductions, loss of personnel due to deployments, as well as reduced appropriated funds to fund mess attendant contracts, equipment replacement and facility maintenance and repair. "New, innovative methods of operating, funding and manning are needed in order to ensure our dining facilities are able to execute their mission of feeding and serving America's Airmen." (Halverson, 2006) Creative plans are needed to adjust operations and adapt to new ways of running the Air Force's food and beverage business. Size and complexity of current dining facilities drives excessive infrastructure and operations cost compared to the number of meals served to meal card holders.

"Air Combat Command currently spends $22 million annually for food mess attendant contracts (which encompasses: serving food, operating cash registers, custodial duties etc) at 36 dining facilities, which equates to $7.17 a meal per meal card holder. The $7.17 per meal does not include expenses for food, cooking, facility maintenance and utility cost. If all costs were considered, Air Force Services believes the cost per meal would be in excess of $25.00. The cost of mess attendant contracts continues to climb while O&M budgets continue to fall, forcing reductions in service and feeding hours of operations and in some cases closure of secondary (e.g. flight line) facilities." (Halverson, 2006) The USAF/A1S has targeted the Air Force Food and Beverage transformation as one of the highest priorities with the strategic planning process. This should be studied

because food operating costs continue to rise as budgets/operating monies continue to fall. Air Force dining facilities operate similarly to the old university campus cafeterias. The Air Force feeding populace (Airmen) also nearly mirrors university student populace. They both are similar in financial status, age groups, social groups, eating habits and tastes, and are usually restricted by base/campus leadership of when and where they are allowed to eat. Consequently, the Air Force needs to change the way it feeds its Airmen and it is considering a campus style feeding model as its successor.

Research Objectives

The purpose of this research is to compare the Air Force's food service program with six universities' food service programs. The results of this study will then be provided to the Services Strategic Planning Board and Director Air Force Services. This information will assist the Planning Board in determining if the needed change should represent one or more campus feeding models examined in this research.

The following industry theories were applied to the research:

1. Companies are often faced with the decision to "Make or Buy". The "Make or Buy" decision may expose a company's core competencies which may be detrimental to the company's niche or tradition.

2. The theory of "Change Management" was also applied to the research. "Change Management" is the process of developing a planned approach to change in an organization. Typically the objective is to maximize the collective benefits for all people involved in the change and minimize the risk of failure of implementing the change. In the book "Leading Change" by John P. Kotter, he explains why transformation efforts fail. The book was based on his analysis of dozens of initiatives that produced significant

useful change in organizations via restructuring, reengineering, re-strategizing, acquisitions, downsizing, quality programs, and cultural renewal (Kotter, 1996).

3. "Lean Thinking" was also applied to the research. "Lean Thinking" is a theory that will assist in saving our most valuable resources. Furthermore, Air Force Smart Operations for the 21st century (AFSO21) is a by-product of "Lean Thinking". AFSO21 is a transformational initiative for all Airmen that eliminate waste from our end-to-end processes (AFSO21 CONOPS). This research objective facilitates the development of the research question and investigative questions.

Research Question

Which universities'/colleges' feeding model, based on shared criteria and factors (characteristics), should the Air Force's feeding model most resemble?

Investigative Questions

Multiple investigative questions are addressed in order to answer the research question:

*1. Which of the **13 rated criteria** most affected the six represented universities'/colleges' decision to outsource or not?*

*2. Which of the **13 rated criteria** does the Air Force consider important when deciding to outsource or not?*

*3. What **criteria** do the Air Force and the six universities' share?*

*4. What **factors** most affected the six represented universities'/colleges' decision to outsource or not?*

*5. Which **factors** do the Air Force consider important in the decision to outsource or not?*

*6. What **factors** do the Air Force and the six universities' share?*

Hypothesis

It is hypothesized that the Air Force's feeding model should resemble that of a fully outsourced campus feeding model. This hypothesis (before evaluation of criteria and factors) was based on the premise that the Air Force wanted and needed to aggressively cut costs and improve quality. It was hypothesized that the Air Force's feeding model would resemble that of a fully outsourced campus feeding model because that is what some are doing to cut costs.

Research Focus

This study looks at six university campus feeding models to include their history and how their feeding of campus students had evolved/changed. The universities of interest are: 1) Illinois State, 2) Kalamazoo College, 3) Kent State University, 4) Ohio University, 5) St Mary's College, and 6) Washington University. This research identifies the importance of 13 industry food service criteria compared across each of the six universities' and the Air Force's dining service teams'. Finally, this research applied the knowledge learned from the comparison to provide the Services Strategic Planning Board and Director, Air Force Services with outsourcing information. Now that the research focus is established, the theoretical lens will provide a more in depth view of this research.

Theoretical Lens

Providing meals to Airmen is a basic-of-life entitlement that the Department of Defense has entrusted to the Air Force. The Air Force is satisfactory, at best, in the way it delivers meals to its meal card holders. This research is based on the mindset that it is

time for change and the Air Force needs to adopt a new way of thinking when it comes to feeding its Airmen. It appears that the six universities identified in the research have evolved over time to accommodate the needs of their students. Additionally, this researcher operated under the premise that the six universities made successful strides during their evolution and their students and employees were generally more satisfied than they had been in the past. This was the fundamental theory of this research due to documented success declared by each of the six university's food services team. With knowledge of the current ways the universities feed their students compared to the antiquated ways the Air Force feeds its airmen, the results of this research should assist Air Force leaders in making an informed decision on how to feed its airmen. Next we will discuss the how and why (methodology) the research will be analyzed.

Methodology

A qualitative research methodology and specifically a case study strategy for the research design was chosen for this research. The data researched was collected from the Air Force food service operations (Services/A1SF) feeding and messing documents and historical information. Structured phone interviews and document analysis with each of the six university's and the Air Force's dining services team were primarily used to collect data on their management's decision strategies (factors) and their 13 rated food service criteria. The data collected assisted in the overall comparisons and contrasts of the elements studied. In accordance with case study data analysis, the goal was to identify convergence and triangulate data. (Leedy, 2001) The construct validity, external validity and reliability tests were used because these tests best fit the overall

"generalized" data that were collected. The following assumptions and implications were made for this study.

Assumptions

A limiting factor to this research is that it addresses a small represented sample population of six universities to apply to the decision criteria. This research also is limited in scope; meaning it does not consider outsourcing decisions at specific bases.

Implications

This research is intended to provide the Services Strategic Planning Board and Director Air Force Services with valuable statistical measurements that will assist in determining if outsourcing (using a campus style feeding model) would better fit the way the Air Force feeds its Airmen.

II. Literature Review

Chapter Overview

As stated by Jim Halverson, AF/A1SO, "New, innovative methods of operating, funding and manning are needed in order to ensure our dining facilities are able to execute their mission of feeding and serving America's Airmen." (Halverson, 2007) The Air Force is faced with changing the way it feeds its Airmen, and the information presented in this chapter provides motivation and justification necessary for the methodology and analysis portions of this research. First, this provides pertinent background information that describes the Air Forces' need for change in the way it feeds its Airmen. It also examines the changes that food service operations from the Army, Navy and Marines have gone through in the past few years. The demographic similarities between the six universities and the Air Force are then discussed. It then provides how and why the 13 food service industry recognized criteria were used. Then it is followed by an examination of the "Make/Buy" outsource decision process. Strategic Change Management is then introduced because outsourcing requires the careful implementation of change management. Finally, it concludes with a broad overview of "Lean Thinking" and specifically how the Air Force is applying it through Air Force Smart Operations 21. A good place to start is to discuss how the Air Force has evolved in the way it has fed its Airmen.

Historical perspective of how the USAF provided meals to its Airmen

"Tradition" is a word often associated with military dining. The Air Force is no exception with its roots buried in military tradition, especially when it comes to feeding its Airmen. Air Force dining facilities have changed little over the past 20 years with few

exceptions. Dining facilities that were built during the cold war were equipped to serve large numbers of Airmen. Since the cold war the Air Force has decreased its manpower significantly and the overall feeding population with little or no change to dining facility operations. "The cost of mess attendant contracts continues to climb while O&M budgets continue to fall forcing reductions in service and feeding hours of operations and, in some cases, closure of secondary (e.g. flight line) facilities." (Halverson, 2007) In 2006, three Air Force Services officers conducted a Graduate Research Project (GRP) as they sought to provide a framework for change that provides a tool for decision makers to utilize when faced with a feeding contract that has reached the end of its service life. They found that for years Air Force Services organizations have operated dining facilities with little change to strategic direction. Contracts, regardless of type, often run on auto pilot. Organizations renew the contracts when their option years run out with little change or modification to the contract. The only thing that seems to change is the ever increasing price of the contract and sometimes the contractor (Demmons, Rohlinger, and Heiman, 2006). Their research project provides information that supports the overall consensus that "it is time to change the way the Air Force feeds its Airmen".

The Air Force Food Service Staff (A1SF) has identified a need for change in the way it feeds its Airmen and the change may come in the form of outsourcing. With that said, the staff stated they are open to outsourcing because other branches in the DoD have had successful results, but they are also concerned about losing mission required capabilities. They are hopeful that if they outsource, they would benefit from reducing food service operation costs while maintaining their wartime capabilities per the War Mobilization Plan (i.e. military cooks on the ground at forward locations). Finally, they

contest that if outsourced, it would be imperative that some form of control and quality of service be maintained. The Air Force is not the only branch of service that sees the need for change within the way it feeds its troops. The Army, Navy, and Marines also see the need to transform the way they feed their soldiers, seamen and marines.

Army, Navy and Marines also faced changes within their food service operations

For years, the Army, Navy and Marines referred to their dining facilities as "chow halls" or "mess halls" which to some are considered derogatory terms. Even though to some these terms are derogatory, many soldiers, seamen and marines found these terms embedded into the very meaning of what the military's customs and courtesies represented. In the past, feeding troops for the military cook entailed peeling potatoes, butchering a cow, and baking from scratch. "There was a time, not so long ago, when the military operated military foodservice. KP (kitchen patrol) was almost a right of passage for recruits. But over the years the Department of Defense slowly backed away from operating its own foodservice. The Defense Department began its exodus in the late 1980's by contracting most cafeteria functions, with the exception of cooking, to outside companies (King, 2003). Since then, there has been an evolution of the military cook. Now, military food service contracts provide a majority, if not all, of the manpower, management and materials to operate military dining facilities. With contracts such as the Marine Corps deal with Sodexho, the soldier-cook is becoming even more removed from the day-to-day food service operations. A pizza manufacturer created a kiosk called Sprazzo, which debuted in a dining hall in Fort Lee Va., in February, 2003. The station featured four varieties of personal deep-dish pizzas. Sprazzo's creator, Joy Wallace, said she had talked with officials from the Navy and the Air Force and expects that license

agreements with foodservice firms like Sodexho would make it even easier to get the concept onto military installations. The Sprazzo kiosk is particularly noteworthy because it is located in a traditional dining hall, open only to base personnel, and soldiers eat there for free. "Sprazzo's is the clearest signal yet that the military is getting out of the foodservice business." (King, 2003) Army, Navy and Marine leaders identified their need for change with the way they feed their soldiers, seaman, and marines. The changes are in the form of industry style feeding concepts which are provided to enhance customer satisfaction, higher utilization rates and lower overall operating costs.

Demographic similarities between University Students and Air Force Airmen

This section attempts to identify the demographic similarities between the Airmen on a meal card and the university student on a meal card. This part also addresses recognized food service industry terms and university students' perceptions that form a baseline of criteria/factors used in this study.

This section discusses how an Army officer described demographic similarities between soldiers & students. As the Army faced manpower cuts in 1996, CW3 Thomas O. Mell was assigned as the US Army Quartermaster Training with Industry (TWI) Representative as the bridge between the Army and the new contracted Marriott Management Services (MMS). In 1996, MMS was the industry leader in contract food service; they provided more than four million meals per day to students in kindergarten through grade 12, college and university campuses, hospital patients and staff, and corporate accounts nationwide. The U.S. Army contracted MMS in direct result of food service manpower cuts and Warrant Officer Mell was put in charge to ensure a smooth transition. As Warrant Officer Mill increased his knowledge of the new contract he

stated, *"I realized that the college student is exactly the same as a soldier from a customer standpoint. College students and soldiers share almost all demographic characteristics, as well as both having meal cards."* (Mell, 1997)

In December 2007, the Air Force's active duty demographic information was identified as: 325,725 individuals were on active duty with 260,798 of them enlisted personnel. Of the enlisted force, 44.83 percent of enlisted force was under the age of 26. (AFPC, 2007) Table 1 shows that the average age of Staff Sergeants and below was 28 years of age or younger. (AFPC, 2008) This information only represents the age of Air Force personnel and does not identify the number of personnel on a meal card. It does show that nearly 50 percent of the enlisted force was under the age of 26. It also shows that Staff Sergeants (E-5) or below represent the age group of 28 years of age and younger and this group makes up the majority, if not all, of the meal card populace.

Table 1. United States Air Force 2008 Age Demographics (AFPC, 2008)

RANK / GENDER		AVG AGE
AB/AMN	MEN	20.3
	WOMEN	19.9
	TOTAL	20.2
A1C	MEN	21.6
	WOMEN	21.4
	TOTAL	21.5
SRA	MEN	24.0
	WOMEN	23.8
	TOTAL	23.9
SSG	MEN	28.1
	WOMEN	27.8
	TOTAL	28.0
TSG	MEN	34.9
	WOMEN	34.2
	TOTAL	34.8
MSG	MEN	39.9
	WOMEN	39.6
	TOTAL	39.8
SMS	MEN	42.6
	WOMEN	42.5
	TOTAL	42.6
CMS	MEN	45.0
	WOMEN	45.4
	TOTAL	45.0
TOTAL	MEN	28.6
	WOMEN	27.2
	TOTAL	28.3

These Air Force enlisted age demographics are presented to form a baseline of the Air Force feeding populace (Air Force enlisted members on a meal card). A baseline of the university feeding populace will now be ascertained.

In the study titled "University Students' Perceptions of Brand Name Foodservices", the authors described the demographic breakdown of College students who were on a meal plan from universities in the NCAA Big 12 conference. Table 2 identifies the age break down of a college student. (Gregorie, Hyeon-Cheol, Lee, 2003) Table 2 also shows that the age group (26 years of age and younger) make up over 95 percent of the represented university's feeding populace (students on a meal plan).

Table 2. University Student's Demographics (Gregorie, Hyeon-Cheol, Lee, 2003)

Variable	**Frequency**	**Percentage (%)**
Gender		
Male	104	50.7
Female	101	49.3
Ethnicity		
Caucasian-Non-Hispanic	123	60.0
Asian/Pacific Islander	44	21.5
African American	15	7.3
Hispanic	4	2.3
Native American	15	7.3
Others	4	2.0
Age	**141**	**68.8**
18-20		
21-23	**50**	**24.4**
24-26	**7**	**3.4**
27-29	4	1.5
Over 30	3	1.5

The purpose of determining each of the feeding populace's baselines is to identify the age similarities between the Air Force enlisted member on a meal card (28 years of age and younger) and the university student on a meal plan (26 years of age and younger). By identifying age similarities between feeding populaces, it can be assumed

that other similarities exist. Other similarities that may exist between the feeding populace are taste in food, selection of food, and eating habits. Now that it has been determined that there are similarities between the feeding populaces, we will establish the 13 rated criteria used in this study.

Recognized food service industry terms and university students' perceptions

The study titled "University Students' Perceptions of Brand Name Foodservices" assisted in identifying recognized food service industry criteria. Data were collected using an online survey of 2400 randomly chosen students enrolled at each of the universities in the NCAA Big 12 conference (200 from each school). A total of 210 students responded; 205 usable questionnaires were obtained.

Results of this study emphasized the importance of the dining environment and cleanliness in addition to food quality as attributes important to university students. University foodservice operations had been expanding the variety of food options offered to students beyond the traditional dining centers to include food courts, convenience stores, and brand name foodservices operations such as Burger King, Subway, Starbucks, etc. To be competitive and successful in the campus dining business, university foodservice managers understood how students perceived and recognized brand name foodservice quality attributes when they chose their dining options. The purpose of this study was to identify university students' perceptions of brand name foodservice operations, examine the underlying dimensions of these perceptions, and explore attributes important to students when selecting a brand name foodservice operation. A questionnaire, which could be distributed online, was developed for the study. The Importance section of the questionnaire asked students to rate the importance of a list of

13 foodservice elements/criteria in their selection of brand name foodservice operations. A five-point Likert scale ranging from 1= Least important to 5=extremely important was used to rate the elements.

Table 3 shows the four categories and the 13 rated criteria that were used during the interview process. The four categories were established to organize the 13 rated criteria. These four categories are: 'Costs', 'Employees & Management', 'Quality', and "Convenience'. The 13 rated criteria were developed from the "University Students' Perceptions of Brand Name Foodservices" study along with the assistance from university's dining managers and Air Force SME's (Subject Matter Experts). After discussion with the university managers and the SME's, a modified version of the 13 elements used in the (Gregorie et al., (2003) study were developed into the 13 rated criteria used in this study. Two elements from the Gregorie study, "prestige" and "new experience" were substituted with the two criteria, "location of eating establishment" and "flexibility". The "prestige" and "new experience" elements were substituted because they had no applicability to this study and the Air Force's decision in whether to outsource or not. The "location of eating establishment" criterion was important to Air Force SME's because it was imperative that the eating establishment was located in close proximity of all base personnel (normally in a central location on base). The "flexibility" criterion was important to add because flexibility encompasses operating hours (number and times of meals provided). The 13 criteria were established to provide each dining services staff (universities'/colleges' and Air Force's) with industry recognized criteria. This criteria will then be rated to provide a measurement (Likert scale ranging from 1=

Least important to 5=extremely important) placed on each of the dining services staff's level of importance when determining whether to outsource or not.

Table 3. Four categories/13 rated criteria

Category 1: Costs
A. Overall operating costs
B. Price per plate
C. Availability of budget
Category 2: Employees & Management
A. Overall skill of workers/managers
B. Importance of training
C. Relationship between workers and management
D. Management Control
Category 3: Quality
A. Overall quality of dining experience
B. Variety/selection of food items
C. Environment of eating establishment
Category 4: Convenience
A. Location of eating establishment
B. Speed of service
C. Flexibility

Now that the 13 rated criteria have been determined it is important to understand the "Make Buy" outsource decision process.

An examination of the "Make/Buy" outsource decision process

Perhaps a good place to start is to define *outsourcing*. Tompkins Incorporated defined outsourcing as a management tool that shifts the organizational structure of companies and is also a business transformation process that can create great opportunity for improved performance. However, it can also create the opportunity for problems, issues and even failure if poorly pursued. In the search for core competencies and non-core competencies to outsource, it's easy to overlook the fact that outsourcing is itself a

competency. As such, it must be approached with business process knowledge and outsourcing processes experience to reap its full benefits. A company with outsourcing as a core competency can effectively develop outsourcing relationships and manage its outsourced functions. (Tompkins Associates, 2008)

Next, it is important to define core competencies. "A *core competency* is something that a firm can do well and meets the following three conditions of an organization. First, a core competence should provide potential access to a wide variety of markets. Second, a core competence should also make a significant contribution to the perceived benefits' as experienced by the customer of the product. Finally, a core competency should be difficult to imitate by competitors." (Sislian and Ahmet, 2000)

The journal article titled "A Multidimensional Framework for Understanding Outsourcing Arrangements" is used to develop the basic categories used in this study. According to the authors, there are four broad categories of outsourcing engagements identified that differ in terms of scope. These include out-tasking, co-managed services, managed services and full outsourcing. Numerous characteristic differences exist between these categories, and many variants of each arrangement were subsumed under each respective category. Nevertheless, creating a framework for the range of available outsourcing alternatives and their characteristics can help managers identify and develop the outsourcing strategy appropriate for their business (Autry, Locke, Moore and Sanders, 2007). Autry et al. (2007) described these categories in greater detail below.

> 1. Out-tasking. Here only one aspect of the total function is assigned to an outside party, rather than responsibility for the entire function. Responsibility assigned to the supplier is relatively small, confined and specific.

2. Co-managed Services. Here client and supplier share responsibility for managing the tasks and assets, and in many cases work collaboratively.

3. Managed Services. Here the client typically engages the supplier to design, implement and manage an end-to-end solution of a complete function. The supplier is now responsible for all aspects of the function, including equipment, facilities, staffing, software, implementation, management and ongoing improvement.

4. Full Outsourcing. In this arrangement, the client assigns total responsibility to the supplier for the design, implementation, management and often the strategic direction of the function, operation, or process.

This research required the translation of Autry et al.'s (2007) definitions into terms more familiar to the food services industry: self-operated, co-sourced, and fully outsourced. In this translation, Autry et al.'s (2007) lowest level of outsourcing, out-tasking, is considered an option within the self-operated category because control of the operation remains wholly within the host organization. The categories of self-operated, co-sourced, and fully outsourced are defined below:

1. Self-Operated. Here all or the majority of the functions are assigned to the host organization. Small non-core competency functions may be out-tasked (i.e. messing contract for a food service operation).

2. Co-Sourced. Here a relationship is established between the host organization and an outside organization. An outside organization could co-source a multitude of different entities of an operation (i.e. food service operation co-sourcing management positions).

3. Fully Outsourced. Here all or the majority of the functions are outsourced to an outside organization (i.e. university's dining services outsourcing Sodexho Dining Services).

Because of the differences in the nature of the client-supplier relationship and the responsibilities of each party; Autry identified four categories of relationship types that correspond to the four various combinations of levels of the two outsourcing dimensions.

These are shown in Figure 1. The four outsourcing relationship types are described below (Autry, et al., 2007).

1. Nonstrategic Transactions. This category encompasses the outsourcing of low criticality tasks with small or limited scope, resulting in out-sourcing engagements that are solely transaction oriented, such as a simple commodity exchange. The product provided by the supplier is typically standardized and alternative sources of supply or market access are readily available.

2. Contractual Relationships. The scope of the outsourced task is higher than with non-strategic transactions, though the function is still of low criticality to the organization. Moderate levels of communication frequency characterize this relationship, and unlike the case of the transactional relationship, dependence exists between the client and supplier.

3. Partnerships. This relationship type is characterized by the outsourcing of a critical task or function, albeit low in scope. The term "partnership" is used to connote strong and enduring trust between client and supplier, as well as a strong commitment to the relationship although the parties may not interact frequently. An example of this relationship could be the out-sourcing of just-in-time replenishment of a critical manufacturing component.

4. Alliances. The most comprehensive outsourcing relationships occur when both criticality and scope of outsourced task are high. These arrangements are defined as alliance relationships, and reflect high interaction frequency, significant trust and commitment between client and supplier. Alliances presume a high level of confidence in the capabilities and integrity of the other party, and require significant resource investment in ongoing relationship management.

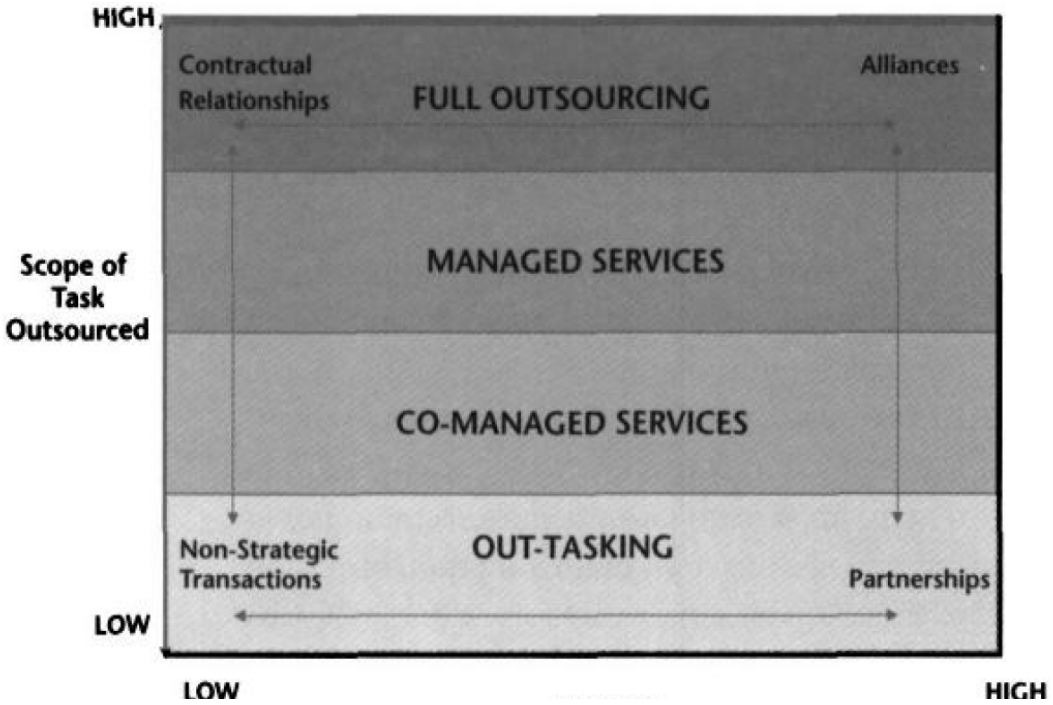

Figure 1. Outsourcing Relationships (Autry, et al., 2007)

Managers should understand the relationship requirements of the different types of outsourcing engagements and make their organizational plans accordingly. The number of comprehensive outsourcing engagements, such as alliance type relationships, must be kept small due to the extensive relationship management requirement. Relationships such as non-strategic transactions, on the other hand, can be numerous as only monitoring efforts are required. Outsourcing engagements requiring a blend of relationship management and supplier monitoring, such as partnerships and contractual relationships, fall in the middle of the scale as shown in Figure 2. (Autry, et al., 2007)

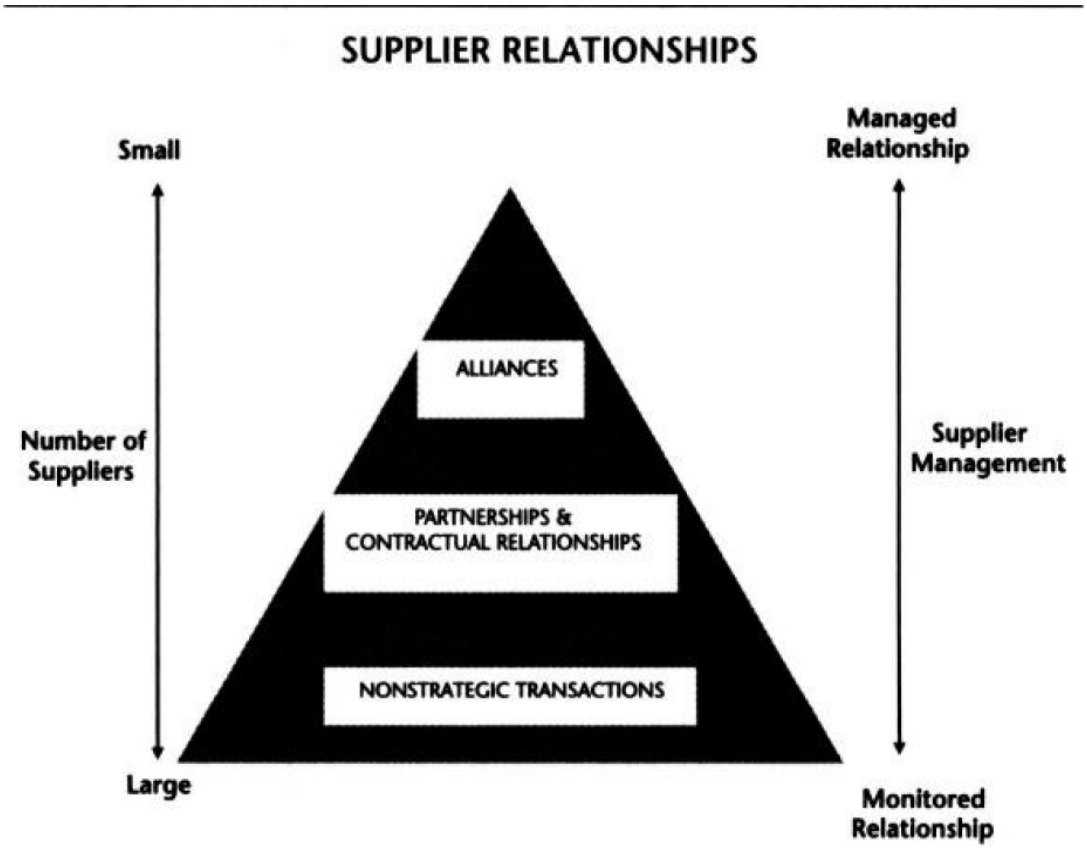

Figure 2. Supplier Relationships (Autry, et al., 2007)

Many suppliers achieve economies of scale by aggregating the needs of different, sometimes competing, clients. Suppliers would not be able to offer a competitive advantage if it were not for the economies of scale that come from pooling the needs of many similar clients. However, this situation inherently creates certain risk factors. One such risk - proprietary risk - is the potential for client information to leak to an external party or be co-mingled with that of another client. This type of risk can be particularly damaging in the case of proprietary information, such as a unique technology or process. Proprietary risk increases when the function outsourced is strategic in nature and is designed to provide a competitive advantage to the firm. Although various mitigation strategies can be used to minimize this occurrence, companies should carefully evaluate

proprietary risk (Figure 3) when deciding which functions to outsource and exercise due diligence with respect to the supplier in extracting the necessary contractual commitments (Autry, et al., 2007).

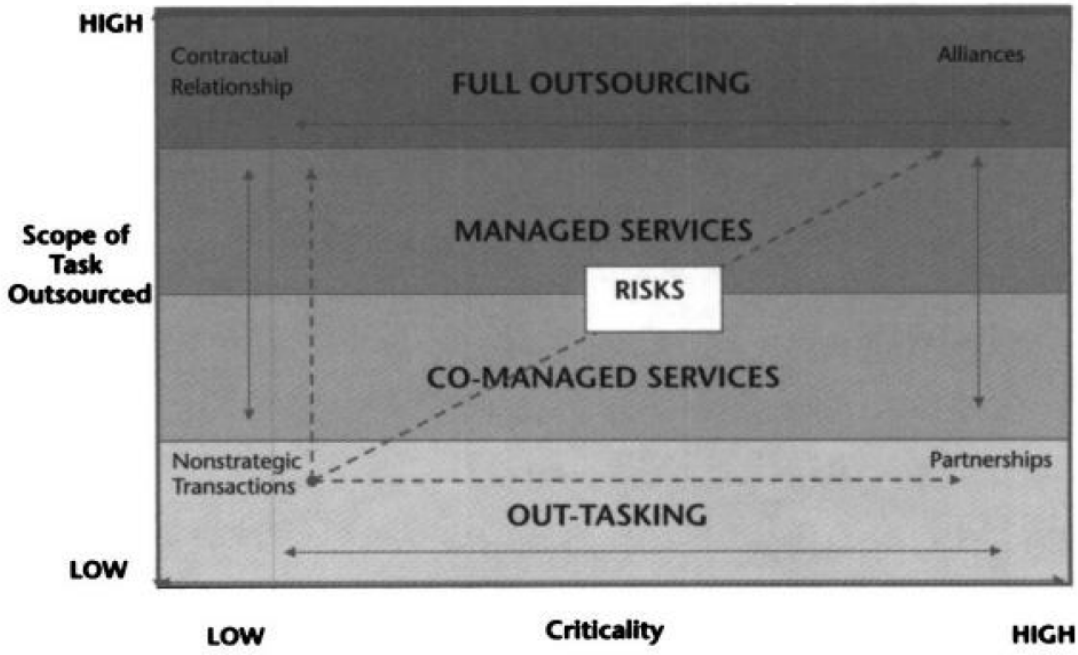

Figure 3. Risk Levels in Outsourcing Relationships (Autry, et al., 2007)

Another type of pooling risk - contention risk - arises from the potential that a large number of clients may simultaneously compete for supplier services, which the supplier may then not be able to provide. This is especially true for suppliers with clients concentrated in a particular industry that may be suddenly subject to the same government regulation or may want the same emerging technology. Suppliers do not have infinite capacity and resources, and thus typically balance these with the needs of many different clients. There is always the potential for lack of service at a time of critical need, if an external event forces a large number of clients to demand services. Although this is usually a relatively small risk due to the availability of subcontracting,

its presence further underscores the importance of giving careful consideration to the outsourcing of critical functions.

This final risk is equally valid for all types of outsourcing engagements and relates to the risk of hidden costs associated with outsourcing. The sheer number of variations of sourcing engagements creates ample opportunity for the client to omit, overlook, or underestimate many costs. One example is the omission of an important task in the contract of which the client was unaware or simply forgot to include. Here the supplier will perform the task at an additional cost. Although this reflects more on poor contracting, it is still an unexpected cost. Another example is the under-forecasting of work volumes by the client. In this case, the supplier may find the work volumes to be higher than anticipated by the client and charge accordingly. The potential for the discussed risks increases with the level of sourcing engagement, as do the potential benefits. This relationship is illustrated in Figure 4, which shows that less comprehensive sourcing engagements are more appropriate to meet financial or resource-based business objectives and they incur lower risks. By contrast, more comprehensive sourcing engagements are designed to meet more strategic business objectives but have the potential for greater risks (Autry, et al., 2007).

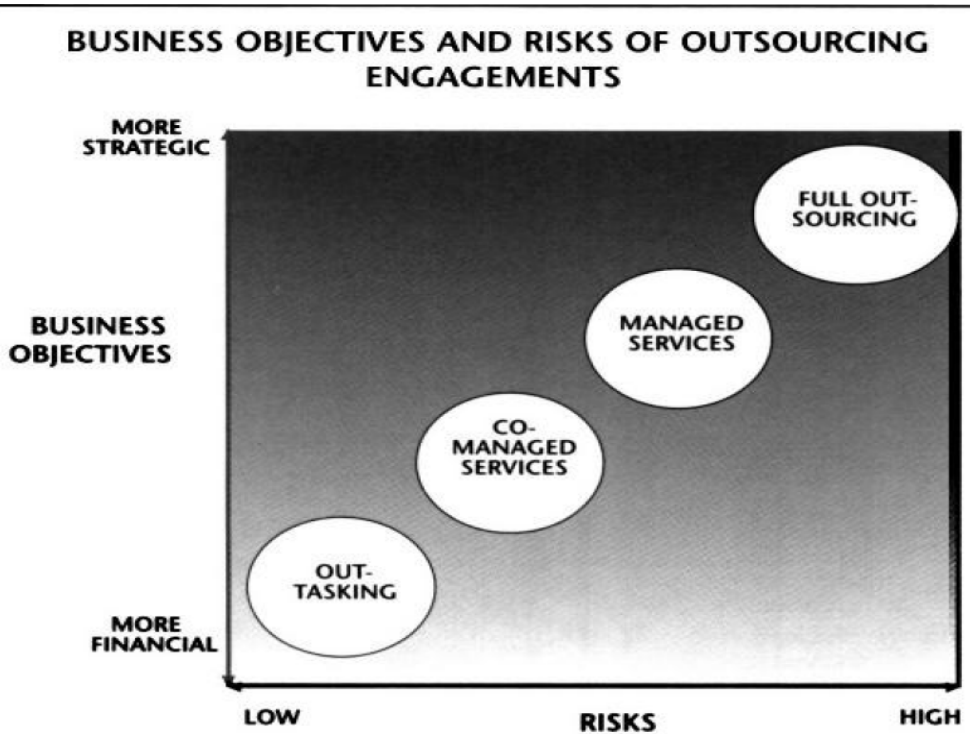

Figure 4. Business Objectives & Risks of Outsourcing Engagements (Autry, et al., 2007)

Outsourcing, though considered a viable option when bettering a company's management efficiencies, requires *change*. Now, the Strategic Change Management concept will be introduced.

Strategic Change Management

Change Management is a broad, macro-level and abstract concept. Change management consultants have been able to take this abstract concept and make it more tangible and measurable. Furthermore, leaders in many organizations recognized that change management was an important strategy for success. Businesses all across the world had adopted "change management" processes to keep track with global markets. The Chief of Staff, United States Air Force had required the book titled "Leading Change" by John P. Kotter to be placed on the professional reading list. In his book,

Kotter explains why transformation efforts fail. It was based on his analysis of dozens of initiatives over the prior fifteen years to produce significant useful change in organizations via restructuring, reengineering, re-strategizing, acquisitions, downsizing, quality programs, and cultural renewal. (Kotter, 1996) One of the major reasons change was talked about in the global arena was that unmanaged change can lead to the destruction of a business, corporation or possibly a government. Kotter goes on to state, "To some degree, the downside of change is inevitable. Whenever human communities are forced to adjust to shifting conditions, pain is ever present. But a significant amount of the waste and anguish we've witnessed in the past decade is avoidable. We've made a lot of errors, the most common of which are these: 1) Allowing too much complacency, 2) Failing to create a sufficiently powerful guiding coalition, 3) Underestimating the power of vision, 4) Under communicating the vision by a factor of ten, 5) Permitting obstacles to block the new vision, 6) Failing to create short-term wins, 7) Declaring victory too soon, and 8) Neglecting to anchor changes firmly in the corporate culture." (Kotter, 1996) In slowing down the new initiatives, creating unnecessary resistance, frustrating employees endlessly, and sometimes completely stifling needed change, any of these errors could cause an organization to fail to offer the products or services people want at prices they can afford. Budgets are then squeezed, people are laid off, and those who remain are put under great stress. The impact on families and communities can be devastating. (Kotter, 1996) In 2005, The Air Force was going through major changes with the downsizing of personnel, transferring of wartime resources to the Army and Marines, and diminishing operating and maintenance budgets. Moreover, there was little money to waste on expensive support operations (i.e. dining facilities) with high

overhead. Air Force dining facilities have been identified to change the way they operate due to their high costs of operation. Air Force leaders had recognized this need for change and had developed and implemented new continuous improvement programs. The new continuous improvement program called AFSO21 was structured around the concept of eliminating redundancy and wasteful processes.

AFSO21 and Lean Thinking

The Air Force was faced with change, meaning that with the reduction of manpower and the reduction of resources, the Air Force had to accept the change and work smarter. Hence the introduction of the continuous improvement program, "AFSO21". "Fundamentally, AFSO21 establishes a mindset to select and use the right tools and techniques to identify problems to attack and opportunities for improvement. It emphasize the use of our greatest resource in doing so—our innovative, dedicated Airmen, guided by world-class leadership and unique core values. (AFSO21 CONOPS)

- AFSO21 aligns our Air Force culture of continuous process improvement with a standardized, disciplined approach to achieve world-class results.
- AFSO21 is applicable across organizational, functional, and capability boundaries with the ultimate objective of improving the combat capability we provide.
- AFSO21 adapts improvement methods and operating concepts from Lean, Six Sigma, Theory of Constraints, and Business Process Reengineering into a distinct Air Force model.

Once again, AFSO21 is a continuous improvement program that adopted "Lean" thinking that attempts to mitigate or eliminate sub-optimal processes. "Additionally, most processes existed across functional boundaries, which made waste more likely and simultaneously hard to see." (AFSO21 CONOPS)

Summary

Budget constraints and increased operating costs have forced Air Force to change the way it feeds its airmen. The Army, Navy, and Marines have decided to outsource many of their food service operations. The "Make/Buy" outsourcing decision is presented to provide the Air Force with a viable solution. Three different categories of outsourcing (Self-Operated, Co-Sourced, and Fully Outsourced) are presented to assist in the overall decision of this study. Strategic Change Management is necessary for understanding the change process, especially when dealing with the scope of change that has to occur when outsourcing. Finally, AFSO21 is introduced to place value on continuous process improvement which is needed before, during, and after change occurs.

III. Methodology

Chapter Overview

The purpose of this chapter is to describe the chosen methodology for organizing the research design and collecting relevant data. This researcher reviewed literature from Creswell (1998, 2003), Leedy et al (2001) and Yin (2003), and a qualitative approach was selected with a case study as the specific form of inquiry. Using guidance from Yin (2003), a series of protocol questions were constructed which served as the foundation for targeted questionnaires. The resultant interviews generated from these questionnaires served as the primary source of data collection. Once the data were gathered, a variety of case study analytical tools described by Yin (2003) and Creswell (1998) were employed, including pattern-establishment, categorical aggregation and direct interpretation. These strategies were used to draw the conclusions outlined in chapters four and five. Future researchers may choose to investigate additional business feeding strategies using this existing framework for data collection. Specific commentary on future research possibilities is provided in the conclusions. The next section discusses the processes of research design.

Research Design

Creswell identifies three distinct approaches to research design: quantitative, qualitative, and mixed method (Creswell, 2003:17). He defines *quantitative research* as:

> ...One in which the investigator primarily uses post positivist claims for developing knowledge (i.e. cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data. (Creswell, 2003:18)

In contrast to quantitative research, he defines *qualitative research* as:

> An inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting. (Creswell, 1998:15)

In similar fashion, Leedy et al (2001) describe qualitative methods in terms of being "used to answer questions about the complex nature of phenomena, often with the purpose of describing and understanding the phenomena from the participants' point of view". (Leedy and Ormrod, 2001:101) Finally, Creswell identifies the mixed method approach to research design that includes elements of both qualitative and quantitative methodologies, defined as:

> …One in which the researcher tends to base knowledge claims on pragmatic grounds (e.g. consequence-oriented, problem-centered, and pluralistic). It employs strategies of inquiry that involve collecting data either simultaneously or sequentially to best understand research problems. The data collection also involves gathering both numeric information (e.g. on instruments) as well as text information (e.g. interviews) so that the final database represents both quantitative and qualitative information. (Creswell, 2003:18-19)

To select an appropriate research approach for a given study, one should be able to logically and clearly define the relationship between the problem and a particular research approach. As an example, a researcher seeking to identify or explain the relationship between measured variables (e.g. numerical quantities) would likely be best suited to select a quantitative approach (Leedy and Ormrod, 2001). In contrast, if the researcher's aim is to explore and characterize existing phenomena, or to develop a theory regarding such phenomena, a qualitative method would likely be the better choice (Leedy and Ormrod, 2001). In summary, Table 4 identifies the three types of approaches available to researchers.

Table 4. Research Method Procedures (Creswell, 2003:17)

Quantitative	Qualitative	Mixed Methods
- Predetermined - Instrument based questions - Performance data, attitude data, observational data, and census data - Statistical analysis	- Emerging methods - Open-ended questions - Interview data, observation data, document data, and audiovisual data - Text and image analysis	- Both predetermined and emerging methods - Both open- and closed-ended questions - Multiple forms of data drawing on all possibilities - Statistical and text analysis

As a final note on the methodology selection, perhaps the strongest indicator is the data itself. Leedy et al (2001) clarify: "Data and methodology are inextricably interdependent…the methodology to be used for a particular research problem must always take into account the nature of the data" (Leedy and Ormrod, 2001:100). As a consequence, was careful to consider the motivation behind the study, the questions to be answered, and what data would be required to draw conclusions. Moreover, the same set of data, when analyzed with varying methodologies, might suggest quite different conclusions, each of which may vary both from each other and, more importantly, from the truth.

Qualitative Method

This section seeks to identify the distinguishing characteristics that separate qualitative research from the other approaches. First, whereas quantitative studies are often conducted with existing data at an enclosed defined location; qualitative studies are often executed in "the field" and within the existing surroundings of the subject of study. Here, the researcher can gather extensive data and valuable insight due to her or his

direct, active involvement with the experiences of the subject(s) (Creswell, 1998:16; 2003:181). As with any research, the researcher's personal involvement in conducting the study makes very real the possibility of introducing bias. Indeed, Leedy et al (2001) suggest that "in the research environment, the researcher cannot avoid having data contaminated by bias of one sort or another" (Leedy and Ormrod, 2001:222). Still, all is not lost, as bias is expected in research, provided the researcher acknowledges the likelihood of biased data or the specific possibilities of bias within the study (Leedy and Ormrod, 2001:222 to 223).

A second feature of qualitative research is found within the role of the researcher. Within this approach, the researcher serves as the "key instrument of data collection", as the "bulk of the data is dependent on their personal involvement" (Creswell, 1998:16; Leedy and Ormrod, 2001:102). As a result, throughout the study, from data collection to analysis, the researcher must carefully monitor personal biases and behaviors, making every effort to prevent any negative influence on the overall study. Furthermore, since conclusions drawn from qualitative research are dependent on the researcher's interpretations of the collected data suggests identifying possible biases at the earliest opportunity, and rigorously using multiple validity strategies to establish credibility and confidence in the research findings.

Third, the researcher may employ one or more inquiry strategies as a procedural guide for conducting a qualitative study. Example inquiry strategies identified by Creswell are: narrative, phenomenology, ethnography, case study, and grounded theory. In purpose, these strategies are intended to aid the researcher and provide focus on data collection, data analysis, and structured writing (Creswell, 2003:183). Still, the inquiry

strategies are not sets of step-by-step instructions. Leedy et al (2001) reemphasize this point, "There are no magic formulas, no cookbook recipes for conducting a qualitative study" (Leedy and Ormrod, 2001:149). He further states that books written about qualitative research offer "general guidelines based on the experiences of those qualitative researchers" and the specific methods used are only constrained by the researcher's imagination (Leedy and Ormrod, 2001:149).

Rationale for Selecting a Qualitative Methodology

For this study, the primary motivation for selecting a qualitative methodology was the particular nature of the research questions and type of data being collected. As a review, this study began by identifying an overarching research question followed by four supporting investigative questions.

Research Question

This research seeks to answer the question: *Which universities'/colleges' feeding model, based on shared criteria and factors (characteristics), should the Air Force's feeding model most resemble?*

Investigative Questions

*1. Which of the **13 rated criteria** most affected the six represented universities'/colleges' decision to outsource or not?*

*2. Which of the **13 rated criteria** does the Air Force consider important when deciding to outsource or not?*

*3. What **criteria** do the Air Force and the six universities' share?*

*4. What **factors** most affected the six represented universities'/colleges' decision to outsource or not?*

*5. Which **factors** do the Air Force consider important in the decision to outsource or not?*

*6. What **factors** do the Air Force and the six universities' share?*

Once the decision was made to conduct this study using a qualitative approach, it was necessary to select the appropriate corresponding methodology. Again, the selection of an appropriate methodology is very important for any study, as it lays the groundwork for data collection, data analysis, and the writing of the research report. After reviewing the related literature for qualitative studies (Creswell, 1998, 2003; Leedy et al, 2001; Yin, 2003), the case study methodology was selected for this research. Creswell (1998) suggests that a case study is an "exploration of a 'bounded system'". More specifically, he defines the bounded system as the case under study, and notes that "several programs or a single program might be selected for study" (Creswell, 1998:61). Given that the aim of this research effort is to study the management strategies' of six university dining programs, the case study methodology is a logical selection.

Case Study Methodology

After selecting the case study methodology, we examine in greater depth the characteristics of this particular method. The choice for seeking specific case study guidance from Yin was made due to his wide recognition as one of the foremost authorities on case study research. The selection of the case study methodology was reinforced after reviewing the three conditions outlined by Yin (2003) in determining an appropriate research strategy. The three conditions are: 1) the types of research

questions, 2) the extent of control an investigator has over actual behavioral events and 3) the degree of focus on contemporary, as opposed to historical, events (Yin, 2003:5-7).

The research and investigative questions stated in chapter one consist of questions characterized by "how" and "why" interrogations. In addition to the types of questions being asked and the qualitative nature of this study, the control of behavioral events is not required – the purpose of this study is to describe and explore. This study does focus on contemporary events; specifically, the current campus feeding model strategies compared to the Air Force feeding model strategy. Yin (2003) outlines five components that are important. The five components are: 1) a study's questions, 2) its propositions (if any), 3) its unit(s) of analysis, 4) the logic linking the data to the propositions and 5) the criteria for interpreting the findings (Yin, 2003:21). The research and investigative questions mentioned above, more specifically the protocol questions addressed later in this chapter, satisfy the first component of the research design.

The second component, study propositions, is used to direct the researcher towards more focused areas of study that should be examined as part of the overall research effort (Yin, 2003:22). In terms of defining the study's focus, the investigative questions perform this function. An additional benefit of using propositions is that they help guide the researcher to appropriate sources of data or evidence, which are crucial to developing a case (Yin, 2003:22).

In addressing the third component, the unit of analysis defines the particular case being studied (Yin, 2003:22). The case or unit of analysis could consist of an individual (single case study) or group of individuals (multiple-case study) (Yin, 2003:22 to 23). Likewise, the same analogy could be applied to studying an event or multiple events

(Yin, 2003:23). For the purposes of this study, we define the unit of analysis as the management approach (based on the 13 industry recognized criteria) to each of the eight university's feeding strategy. These criteria were introduced in chapter two. According to Yin (2003), the fourth and fifth components are "the least well developed in case studies". This contention may be attributed to the possibility of researcher-induced bias or subjectivity. He further states that "these components represent the data analysis steps in case study research, and a research design should lay the foundations for this analysis". Accordingly, a variety of commonly accepted analysis strategies were employed, including pattern-matching and explanation-building (Yin, 2003:106-110). Creswell (1998) states that case study analysis "consists of making a detailed description of the case and its setting". (Creswell, 1998: 153)

Validity and Reliability

Validity is described by Leedy et al (2001) as "the accuracy, meaningfulness, and credibility of *the research project as a* whole" (Leedy et al, 2001:103). Reliability, however, is defined as "the consistency with which a measuring instrument yields a certain result when the entity being measured hasn't changed" (Leedy et al, 2001:31). Yin's three categories of validity are construct validity, internal validity and external validity (Yin, 2003:34) Leedy and Ormrod define constructs as "characteristics that cannot be directly observed but must instead be inferred from patterns in people's behavior". (Leedy et al, 2001: 98-99)

For this study, an effort was made to ascertain the perspectives and opinions of university/college dining service teams and Air Force Food Service staff (AF/A1SF) regarding outsourcing decisions. These issues are then the constructs for this study. In

regards to construct validity, whenever possible, data were incorporated from multiple sources of evidence, including multiple interviews from different personnel and historical documents. Conclusions drawn from the collected data were made based on the repetitive claims made by more than one respondent (often a team of 3 or 4) from a given program. External validity establishes the domain to which a study's findings can be generalized. (Yin, 2003:34) Each universities'/colleges' feeding strategy had focused on specific criteria and factors that determined their decision to outsource or not. Additionally, external validity and the use of generalized cases assisted the researcher to uncover similarities among the universities'/colleges' and the Air Force's feeding strategies. After telephone interviews were conducted, respondents were supplied with a copy of the notes from the interview. This was done in an effort to verify the accuracy of collected data. These responses were the primary basis for data analysis in chapter four as well as theory building in chapter five.

Finally, in regards to reliability, Yin's (2003) case study protocol guidance was used as a means to structure this case study. The protocol helped to provide a standardized format for data collection and transcription.

Case Study Protocol

Since this research will be using a multiple-case study design, it is important to address developing the case study protocol for this research. Yin (2003) states "a case study protocol is desirable under all circumstances, but it is essential if you are doing a multiple-case study". The case study protocol helps guide the researcher throughout the data collection and analysis process, in addition to increasing research reliability. Yin outlines four areas that case study protocol needs to address: 1. Introduction to the case

study and purpose of protocol, 2. Data collection procedures, 3. Outline of case study report, and 4. Case study questions. In order to properly prepare for formal data collection, the researcher developed a specific protocol for each of the investigative questions. To be able to answer the investigative questions, data collection tools were created (Appendices A-D). Next, we will discuss the design of each investigative question's research protocol in greater detail.

Investigative Question #1

*1. Which of the **13 rated criteria** most affected the six represented universities'/colleges' decision to outsource or not?*

To answer investigative question one, Appendix A was used. Recorded phone interviews were performed with each of the six universities'/college's dining services management teams (1-3 staff members per management team). Subsequently, a rated criteria document (Appendix A) was administered during the interview to evaluate the 13 criteria. To organize the results of the 13 rated criteria, a rated criteria matrix (table 6) was developed. To rate the level of importance a five-point Likert scale ranging from 1= Least important to 5=extremely important was used to rate the criteria. More specifically, each universities'/colleges' dining management team rated how important each of the criteria was in their decision to outsource or not. The limitations of the feeding matrix are: 1) subjectivity in ratings was evident in the each university's/colleges' case, 2) overall interpretation of the ratings by the researcher was also evident, and 3) subjectivity in each of the 13 criteria was evident. Though there were limitations to the matrix, there were also benefits of the matrix. The benefits were as follows: 1) the Likert scale is a known and accepted method of rating importance, 2)

though there is subjectivity with each universities'/colleges' ratings, the matrix used was developed for a quick and a fairly easy method to evaluate each of the criteria (fast results).

To develop the "Top 3" rankings, each university/college dining management team was asked to rate all of its criterion from 1-5; and then *rank* all of its "5" rated criterion from 1-3 (1 being the best, 2 being second best, and 3 being the third best). The "Top 3" rankings were used to place emphasis on the very most important criteria identified by each university/college.

Investigative Question #2

*2. Which of the **13 rated criteria** does the Air Force consider important when deciding to outsource or not?*

Investigative question two was developed to identify those criteria (Appendix C) that the A1SF food services team viewed as important in the decision to outsource/not outsource airmen dining facilities. To organize the results of the 13 rated criteria, a rated criteria matrix (Table 7) was developed. To rate the level of importance a five-point Likert scale ranging from 1= Least important to 5=extremely important was used to rate the criteria. More specifically, the AF/A1SF food services management team rated how important each of the criteria was in its decision to outsource or not. The "Top 3" rankings were used to place emphasis on the very most important criteria identified by the AF/A1SF food services staff.

Investigative Question #3

*3. What **criteria** do the Air Force and the six universities' share?*

This question was developed to formalize criterion comparisons between the six universities/colleges and the Air Force. Level of importance scales (Figures 7-9) were developed to show a graphical representation of the shared criterion between the Air Force and the each of the six universities/colleges.

Investigative Question #4

*4. What **factors** most affected the six represented universities'/colleges' decision to outsource or not?*

Investigative question four was answered by using the interview questions formed in Appendix B. Additionally, these interview questions were used to extrapolate the factors that the six universities'/colleges' dining services teams perceived as important when deciding to outsource or not. The interviewer/researcher used probing questions that followed key questions to help further explore the dining services team's rationale of their outsourcing decisions. The interviewer/researcher allowed space for recording on the interview questions document. (Creswell, 1998)

Investigative Question #5

*5. Which **factors** do the Air Force consider important in the decision to outsource or not?*

Investigative question five was answered by using the interview questions formed in Appendix D. Additionally, these interview questions were used to extrapolate the factors that the A1SF food services team perceived as important when deciding to outsource or not. The interviewer/researcher used probing questions that followed key questions to help further explore the dining services team's rationale of their outsourcing

decisions. The interviewer/researcher allowed space for recording on the interview questions document. (Creswell, 1998)

Investigative Question #6

*6. What **factors** do the Air Force and the six universities' share?*

Investigative question six was developed to formalize factor comparisons between the six universities/colleges and the Air Force.

Data Collection

Depending on the specific qualitative study used for the research, data can take multiple forms. Creswell (1998) identifies the four basic forms of qualitative data as: 1) observations, 2) interviews, 3) documents and 4) audio-visual materials (Creswell, 1998:121). Importantly, he notes that each form of data has both advantages and limitations that the researcher should consider when planning the research design (Creswell, 2003:186-187). For this particular study, the data collected consisted primarily of various documents, structured and open-ended interviews. Examples of documents reviewed in this study included a USAF Bullet Background paper titled: *AF Services Food & Beverage (F&B) Transformation initiative*, a USAF Position paper titled: *Air Force Services Food & Beverage (F&B) Transformation*, and a selected sample data obtained from interview notes and reviewed documents.

In preparation for the analysis of resultant data, the type and quantity of data obtained for each protocol question was carefully monitored and documented. Furthermore, the use of multiple data sources offers the critical advantage of triangulation when seeking conclusions. Specifically, Yin states "the most important advantage

presented by using multiple sources of evidence is the development of *converging lines of inquiry*…any finding or conclusion in a case study is likely to be much more convincing and accurate if it is based on several different sources of information, following a corroboratory mode" (Yin, 2003:92). A diagram illustrating the concept of converging lines of inquiry is provided in Figure 5. The diagram simply states that as many different sources of data converge and similarities with in the data are identified then one can ascertain the data as fact.

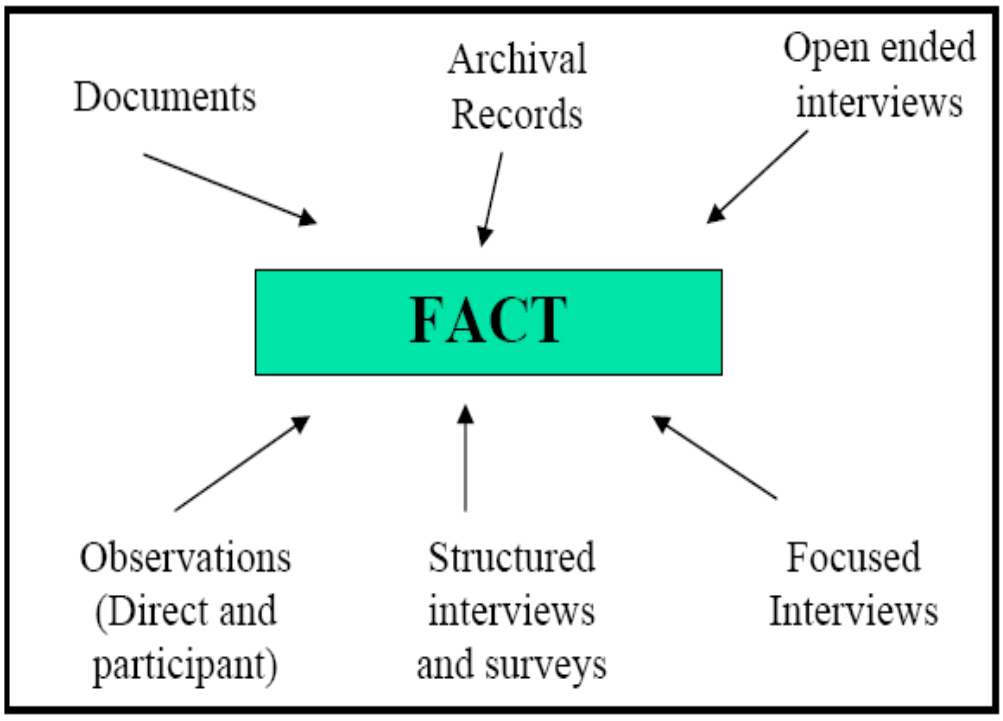

Figure 5. Convergence of Multiple Sources of Evidence (Yin, 2003: 93)

Again, the strategy for collecting the data was based primarily on Creswell's (1998) Data Collection Activities diagram mapped out in Figure 6. This diagram depicts a "series of interrelated activities aimed at gathering good information to answer

emerging research questions". Although Creswell points out that a researcher may start from any point located around the circle, he usually begins with the "Locating Site/Individual" node.

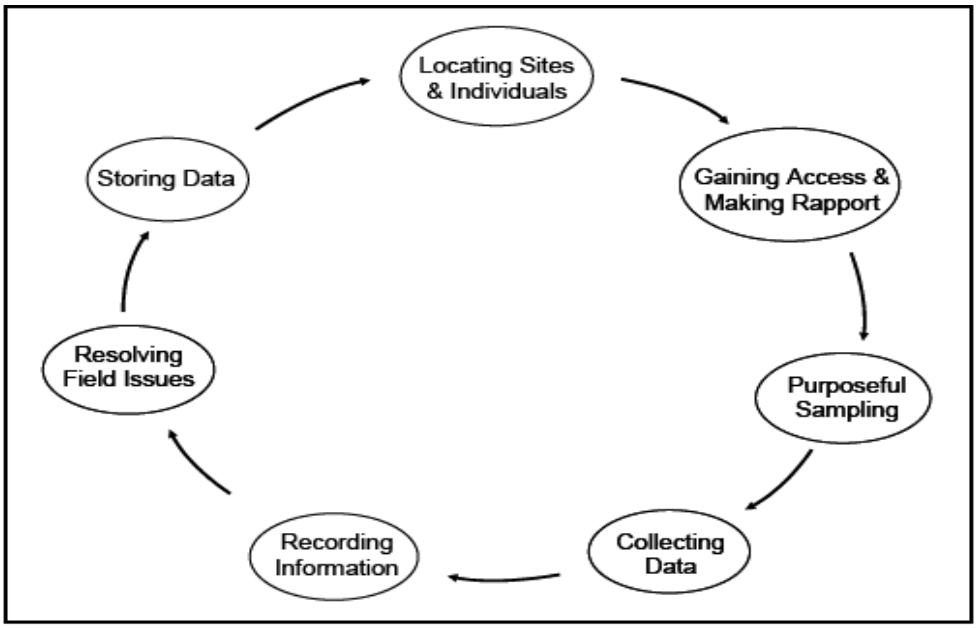

Figure 6. Data Collection Activities (Creswell, 1998:110)

1. Locating Sites & Individuals

As a stepping-off point the initial sites within this study, were limited to campus feeding models at six universities: Illinois State University, Kalamazoo College, Kent State University, Ohio University, Saint Mary's College, and Washington University. Initial discussions and collaboration with advisers and subject matter experts led to the decision to examine the existing Air Force feeding model and compare it with the campus feeding models employed at the universities. In designing the case study protocol, the relevant sources of data were identified that would be best suited for a particular investigative question.

2. Gaining Access & Establishing Rapport

This relied on existing commercial and USAF communication networks, as well as personal contacts to identify key management personnel within the elements under study. Once initial contacts were made within a given community, subject matter experts were asked to identify additional personnel that might yield further insight into the research effort.

3. Purposeful Sampling

Creswell (2003) states the objective of purposeful sampling is to "purposefully select participants or sites (or documents or visual material) that will best help the researcher understand the problem and the research question" (Creswell, 2003:185). For this study, the researcher selected the six university's dining operations based on three represented categories (fully outsourced, co-sourced and self-operated) and the recommendation of subject-matter experts in the field. The reason the six universities and the three categories (two universities per category) were selected will be explained in length during the "Unit of Analysis" section of this research. This researcher spoke with these individuals at length via telephone, in-person and over electronic communication and verified that the six selected universities were suitable candidates for this research.

4. Collecting Data

As previously mentioned, data were collected from documents and interviews. The documents primarily came from managers at the Air Force Food Service branch and each university's Dining Services manager. Prior to conducting interviews, this

researcher requested and obtained approval for the use of volunteers in research from the Air Force Research Laboratory Human Use Administrator.

5. Recording Information

A telephone recording device was the primary method medium for the collection of data. This practice provided additional rigor to the accuracy of data collected. Furthermore, interviewees (1-3 staff members per dining services management team) were provided with summary transcripts of the collected data to verify accuracy and authenticity.

6. Resolving Field Issues

This researcher maintained open communication with field personnel and interviewees throughout the research effort. Existing or unresolved field issues are discussed in chapter five of this report.

7. Storing Data

Multiple copies of the data collection were made in order to prevent the accidental deletion or corruption of files. When warranted, hard copies of the information were printed and stored with the rest of the research documentation in a secure location.

Units of Analysis

Prior to beginning the data collection process, the type and scope of information to be gathered had to be determined, as well as the sources. The perspectives of interviewees and applicable level of their response data were central in defining three units of analysis. The researcher chose three units of analysis to represent the three categories of outsourcing represented in this study. The applicability of these three

categories was most significant when recommending which feeding model the Air Force should most resemble. The first category chosen was "fully outsourced" which was defined as the majority of the dining service operations was managed/controlled by an outside company (i.e. Sodexho manages/controls Kalamazoo and Saint Mary's Colleges). The second category chosen was "Co-Sourced" which was defined as some part of dining service operations was managed/controlled by an outside company (i.e. an outsourced company has a management partnership with Kent State University while the rest of the operation was managed/controlled by the University). The third and final category chosen was "Self-Operated" which was defined as the majority of the dining service operations was managed, controlled, and employed by the University. The six universities' feeding programs were also chosen based on their reputation throughout the food service industry for establishing themselves as successful feeding programs.

Data were collected from management personnel represented by the six colleges/universities illustrated in Table 5 (Unit of Analysis & Categorization of Data Collected).

Table 5. Units of Analysis & Categorization of Data Collected

	Interviews Conducted
Unit of Analysis	College/University
Number of Interviews Conducted with Fully Outsourced Universities	**2 Colleges**
	Kalamazoo College **Saint Mary's College**
Number of Interviews Conducted with Co-Sourced Universities	**2 Universities**
	Illinois State University **Kent State University**
Number of Interviews Conducted with Self-Operated Universities	**2 Universities**
	Ohio University **Washington University**

Summary

This chapter described the research design and specific methodology selected to conduct the thesis study. A multiple-case study design was chosen for researching the management strategies in practice for the eight universities. The data were collected primarily from archival data, documents and phone interviews. Once all the relevant information was identified, a variety of case study analytical tools were used, including pattern-establishment, categorical aggregation and direct interpretation for the purposes of trend identification and theory building. Next, Chapter 4 will discuss the findings of the research.

IV. Analysis and Results

Chapter Overview

This chapter discusses the answers to the six investigative questions posed at the beginning of the study and includes a summary of the specific findings. First, investigative questions one and two answer which of the 13 rated criteria affected the six universities'/colleges' and the Air Force's decision to outsource or not. Investigative question three answers what shared criteria do the Air Force and the six universities' consider important when deciding to outsource or not. Next, investigative questions four and five answer which factors affected the six universities'/colleges' and the Air Force's decision to outsource or not. Finally, Investigative question six answers what shared factors do the Air Force and the six universities' consider important when deciding to outsource or not. The research findings and a brief summary will conclude the analysis portion of this study.

Investigative Question #1

*1. Which of the **13 rated criteria** most affected the six represented universities'/colleges' decision to outsource or not?*

Investigative question one was answered using standardized interview questions (Appendix A) and the criteria ratings from each university (Table 6). The "Top 3" ratings was used to further assist in identifying each Universities'/colleges' most important criteria when deciding to outsource or not.

Table 6. Ranked College Feeding Models Matrix (13 industry-recognized criteria)

	Universities											
Criteria	Ohio	Top 3	Washington	Top 3	Illinois State	Top 3	Kent State	Top 3	Kalamazoo College	Top 3	Saint Mary's College	Top 3
Overall Operating Cost	**5**	**1**	**4**		**5**	**2**	**5**	**2**	**5**	**2**	**5**	**3**
Price Per Plate (value)	**3**		**3**		**5**	**3**	**1**		**1**		**2**	
Availability of Budget	**5**		**4**		**4**		**1**		**4**		**4**	
Skill of Workers & Managers	**5**		**5**		**4**		**5**	**1**	**5**	**3**	**4**	
Importance of Training	**4**		**5**	**2**	**4**		**1**		**5**		**5**	
Relationship Between Workers and Management	**5**		**3**		**4**		**1**		**4**		**3**	
Management Control	**5**	**2**	**5**	**3**	**4**		**1**		**4**		**3**	
Quality of Dining Experience	**5**	**3**	**5**	**1**	**5**	**1**	**5**		**5**	**1**	**5**	**1**
Variety/Selection of Food Items	**5**		**4**		**3**		**1**		**5**		**3**	
Environment of Eating Establishment	**3**		**4**		**3**		**1**		**2**		**5**	**2**
Location of Eating Establishment	**3**		**2**		**2**		**1**		**2**		**5**	
Speed of Service	**3**		**3**		**4**		**1**		**3**		**3**	
Flexibility	**4**		**3**		**4**		**1**		**3**		**2**	

Ratings of each university (Table 6)

Ohio University

(1) Overall Operating Costs

Ohio University's dining services team stated that the "bottom line cost" is everything and that they were able to operate more efficiently than anyone else in the campus feeding industry. With that said they felt that "Overall Operating Costs" criterion was the most important and ranked #1.

(2) Management Control

Ohio University's dining services management team identified the "Management Control" criterion as being a very close second to "Overall Operating Costs" criterion. This was mainly due to the idea that the team frowned upon giving up responsibility to an outsourced company.

(3) Overall Quality of Dining Experience

This criterion received a #3 ranking from Ohio University.

Washington University

(1) Overall Quality of Dining Experience

Washington University ranked "Overall Quality of Dining Experience" criterion #1 due to the dining services team was trying to create more of a "dining-out" experience. Though Washington University is prohibited from outsourcing, the dining services team felt that this criterion would be the most important when considering outsourcing.

(2) Importance of Training

Washington University hires a significant amount of their dining service's employees from the student body. For this they had ranked "Importance of Training" criterion #2.

(3) Management Control

The team stated that outsourced companies answer to many levels of management (very convoluted). Being self-operated also meant Washington University was self-sufficient; meaning that they were able to make decisions quickly and without interruption. "Management Control" criterion ranked #3 of importance.

Illinois State University

(1) Overall Quality of Dining Experience

Illinois State was mandated by the University's Vice President to improve their "Overall Quality of Dining Experience". This is simply why Illinois State University's dining services team ranked this criterion #1.

(2) Overall Operating Costs

By co-sourcing with numerous franchises, Illinois State University was able to reduce overall operating costs. "Overall Operating Costs" criterion received #2 ranking.

(3) Price per Plate (Value)

The "Price per Plate (Value)" criterion received #3 ranking.

Kent State University

(1) Skill of Workers and Managers

Kent State University is co-sourced and had established a "managerial contract" (partnership). Furthermore, Kent State University's dining services team explained that managers needed to acquire marketing, budgeting and purchasing skills that would make them successful. Consequently, they felt that the "Skill of Workers and Managers" criterion ranked #1.

(2) Overall Operating Costs

Kent State University, as most universities/colleges stated that "Overall Operating Costs" was extremely important when they considered to outsource and was ranked #2.

(3) Not Identified

Though the "Quality of Dining Experience" criterion was extremely important, Kent State noted that if overall operating costs and the skill and knowledge of the

managers were good the rest would take care of itself. Therefore, they stated that #1 and #2 rankings were the only rankings given.

Kalamazoo College

(1) Overall Quality of Dining Experience

The dining services staff at Kalamazoo College stated that "Overall Quality of Dining Experience" were by far the #1 ranked criterion. New trends and marketing play a huge role in their decision to outsource.

(2) Overall Operating Costs

Kalamazoo College's dining services staff also stated that outsourcing relieves the stress and responsibility of budgeting, purchasing and payroll. Consequently, they ranked "Overall Operating Costs" criterion #2.

(3) Skill of Workers and Managers

"Skill of Workers and Managers" criterion was ranked #3 by Kalamazoo College.

Saint Mary's College

(1) Overall Quality of Dining Experience

The dining staff at Saint Mary's College stated that it was extremely important that they must provide an outstanding dining experience for their target clients (students). That was simply why they ranked "Overall Quality of Dining Experience" criterion #1.

(2) Environment of Eating Establishment

Also, Saint Mary's College's dining staff stated that to provide an overall quality dining experience they had to provide a pleasant eating environment. Consequently, they ranked "Environment of Eating Establishment" criterion #2.

(3) Overall Operating Costs

"Overall Operating costs" criterion ranked #3.

Investigative Question #2

*2. Which of the **13 rated criteria** does the Air Force consider important when deciding to outsource or not?*

This section will answer which *criteria* were important to the Air Force when deciding to outsource or not. Based on the standardized interview questions (Appendix C) and the criteria matrix (Table 7) the A1SF staff rated the 13 criteria on a level of importance. The "Top 3" ratings were used to further assist in identifying the Air Force's most important criteria when deciding to outsource or not.

Table 7. Ranked Air Force Feeding Model Matrix (13 industry-recognized criteria)

Criteria	Air Force	Top 3
Overall Operating Cost	**5**	**1**
Price Per Plate (value)	**4**	
Availability of Budget	**3**	
Skill of Workers/Managers	**5**	
Importance of Training	**4**	
Relationship Between Workers and Management	**4**	
Management Control	**5**	
Quality of Dining Experience	**5**	
Variety/Selection of Food Items	**5**	**3**
Environment of Eating Establishment	**3**	
Location of Eating Establishment	**5**	
Speed of Service	**5**	**2**
Flexibility	**5**	

(1) Overall Operating Costs (Table 7)

Since the inception of the Global War on Terror, DoD resources have been heavily focused on efforts in the Middle East. The result was a struggle to justify expenditures at in-garrison bases in the CONUS. Organizations work every day to lower operating expenses, while trying to maintain the same levels of quality and service to the customers. Thus, the top questions to ask (criterion) when considering whether or not to outsource operations was "did this move save AF dollars?" In other words did this move lower overall operating costs?

(2) Speed of Service (Table 7)

As efforts continued in the Middle East, the entire Air Force felt the effects, even back at home base. This phenomenon was known in the Air Force as an increased Opstempo. As our fellow Airmen were deployed to the Middle East, those left behind had to sustain the home base mission. With the increased Opstempo, ensuring the day-to-day functions that were required to "regenerate the Airman" such as sustaining physical fitness and providing nourishment, was difficult to accomplish. Thus, the second criterion of utmost importance in considering whether or not to outsource was if the contractor could provide a faster more convenient service to the base (speed of service).

(3) Variety/Selection of Food Items (Table 7)

The third criterion of importance when considering outsourcing addressed the question; can the contractors provide healthy food to sustain the hardworking base populace? Furthermore, some military missions (i.e. long duration flights) required high protein/low residue meals. Other missions (i.e. long flights traditionally fighter pilots) required bite size meals. Consequently, the contractor would be required to provide

healthy and mission specific type foods to support the base populace (variety/selection of food items).

Investigative Question #3

*3. What **criteria** do the Air Force and the six universities' share?*

After comparing Tables 6 and 7, it was determined that the shared criterion considered important by both the Air Force and the six universities are listed in no particular order: Overall Operating Cost, Quality of Dining Experience, and Skill of Workers and Managers. Each universities "top 3" rankings and the overall number of "5" ratings were used to determine which criteria were shared between the Air Force and six universities.

Overall Operating Cost

Overall operating cost was rated by the AF/A1SF team as the profound #1 criterion when deciding to outsource or not. Though the six universities ranked quality of dining experience their #1 criterion, overall operating cost was overwhelming considered their #2 ranked criterion when deciding to outsource or not. Ohio University ranked this criterion an overall #1. Kalamazoo College, Kent State University and Illinois State University all ranked this criterion an overall #2. Figure 7 identified how important the AF/A1SF and the six universities/colleges viewed overall operating expense when considering outsourcing or not.

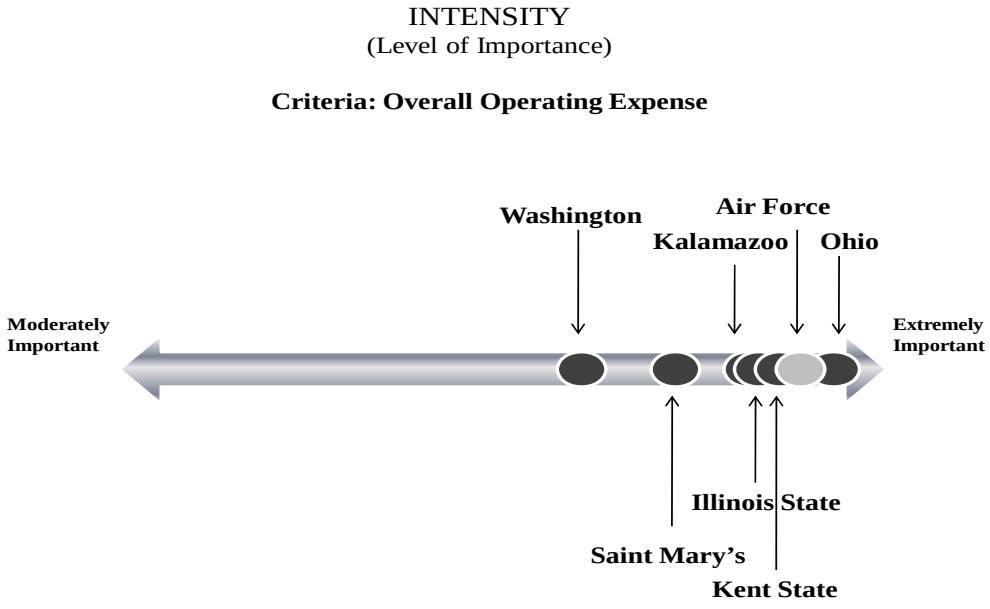

Figure 7. Intensity Level of Importance (overall operating cost criterion)

Quality of Dining Experience

Though the AF/A1SF team did not rank quality of dining experience one of its top 3 ranked criterions, the team rated this criterion a "5" considering quality of dining experience extremely important when deciding to outsource or not. The six universities ranked quality of dining experience #1 overall. Ohio University ranked this criterion an overall #3. Kent State rated this criterion a "5" considering this criterion extremely important; however, they felt that it was not important enough to rank in the top 3. Figure 8 identified how important the AF/A1SF and the six universities/colleges viewed quality of dining experience when considering outsourcing or not.

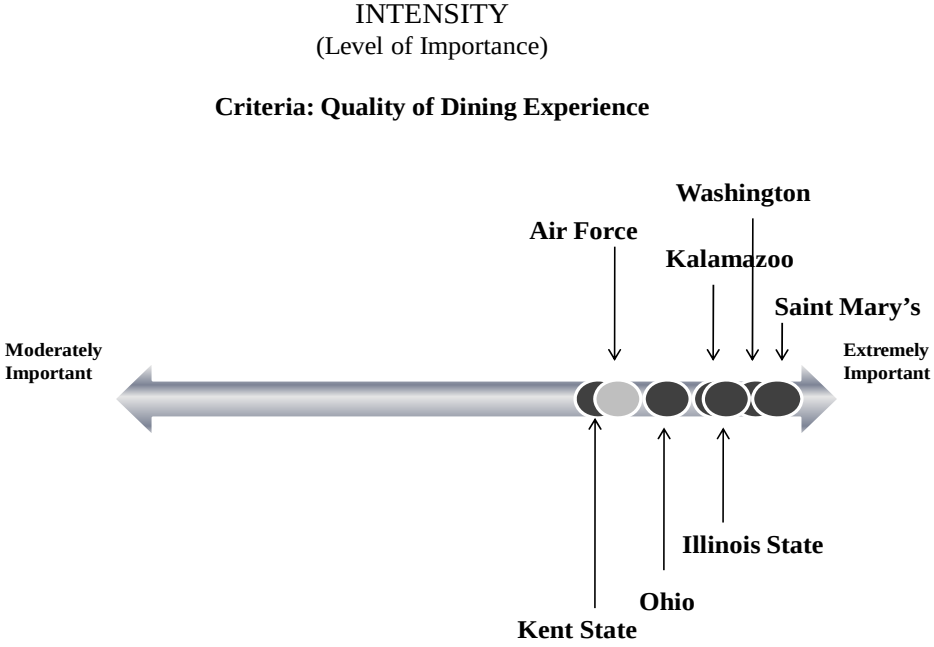

Figure 8. Intensity Level of Importance (quality of dining experience criterion)

Skill of Workers and Managers

The AF/A1SF team rated the skill of workers and managers criterion as an overall "5" rating which meant they viewed this criterion as extremely important when deciding to outsource or not. The six universities/colleges ranked skill of workers and managers as an overall #3. Ohio University, Washington University, Kent State University, and Kalamazoo College rated this criterion an overall "5" considering this criterion extremely important when deciding to outsource. Kent State University ranked this as its overall #1 for this criterion was the sole reason to outsource (partner). Figure 9 identified how important the AF/A1SF and the six universities/colleges viewed skill of workers and managers when considering outsourcing or not.

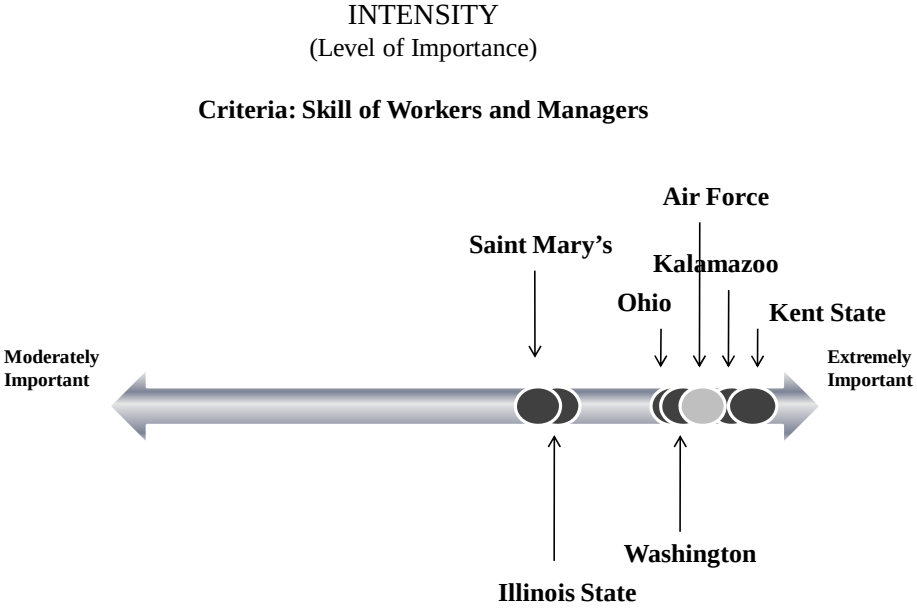

Figure 9. Intensity Level of Importance (skill of workers and managers criterion)

Investigative Question #4

*4. What **factors** most affected the six represented universities'/colleges' decision to outsource or not?*

Investigative question four was answered through interviews with each of the six universities/colleges dining staff using standardized interview questions (Appendix B).

Ohio University

Ohio University's decision to not outsource (stay self-operated) was primarily based on their ability to manage their bottom line. They achieved this by keeping operating costs down while maintaining management control of the operation. They stated that their decision not to outsource was also based on their knowledge that

contracting companies often promised to provide a certain level of quality and service, but seldom delivered. It was also extremely important that Ohio University's dining services management team provided monetary contributions back to the university. Lastly, they stated that smaller schools had more of a tendency to be outsourced than did larger schools.

Washington University

Washington University's decision to not outsource (stay self-operated) was chiefly based on Washington's campus dining population of 25K-30K students. Serving the University's large populations allowed the dining staff to attract top chefs and food service managers. Also by making the decision to not outsource, Washington University retained management control which led to the student body having say in what food services were provided on campus. In the mid 90's, Washington University's dining services management was charged with two specific things: first was to improve the quality of dining operation, and second was to improve the training of employees (eliminated antiquated processes--i.e. cook & hold or batch cooking). By serving a large volume of students the dining services team was able to attract and retain experienced management to include some top chefs in the industry. Consequently, the hiring of top chefs directly resulted in the improvement of the quality and training problems. Finally, The University's dining operation was completely self operated due to the state of Washington's prohibiting any university from being contracted (outsourced); the employees had to be part of a union.

Illinois State University

Illinois State University's decision to co-source was primarily based on their ability to adapt to the shifting trends of the food service industry. Until 1995 Illinois State University dining services operation was a traditional and out-dated food service operation (cafeteria style). Along with the out-dated operation, meal plans (to include the meal plan accounting system) also were antiquated and did not allow for the student to recoup missed meals. This created an overall dissatisfied student populace. It was so bad that the participation rate dipped below 50 percent. Consequently, in 1995, Illinois State's Vice President gave the dining services management team an ultimatum, "either improve or completely outsource". More specifically, they were mandated to improve the quality of the food which included the overall dining experience or hire a company that could (meaning outsource).

Kent State University

Kent State University's decision to co-source (management contract/partnership) was primarily based their understanding of their strengths and weaknesses. Kent State's dining operation served a fairly small populace (in relation to other campuses) of just over 6,000 students and population fluctuations (i.e. summer break) were a major concern. The dining staff stated that their greatest strength (core competency) was that they were very good at making food and the student populace was generally satisfied. Though the student populace was satisfied, the university dining staff was not. The Staff believed that an additional weakness was that their managers (chefs and supervisors) lacked the knowledge, marketing skills, training, and experience needed for a successful operation. Consequently, they decided to partially outsource (partner) by creating a

"managerial contract" with Sodexho. This enabled the managerial staff to keep up with food industry trends (eating habits of students). Finally, Kent State's dining team stated that the decision to outsource was a very difficult due to their experience with outsourcing companies in the past. Moreover, outsourcing companies often promise to provide a certain level of service, but often fall short of their promises. Though Kent State's dining services staff explained that they had to allow for an adjustment period (growing pains), they also stated that their partnership was eventually successful. They stated that it is very hard to make a partnership work, however when it does, it is very powerful.

Kalamazoo College

Kalamazoo College's decision to fully outsource was primarily based on their ability to sustain dining operations for 56 years. The dining staff felt that the contract longevity was due to the great relationship between the college's board of directors and Sodexho dining services. They also believed that a small student populace attracted outsourcing companies due their ability to withstand population fluctuations throughout the school year. The staff went on to state that companies like Sodexho possess outstanding purchasing power and provide up-to-date marketing expertise with the most cutting edge technology. Finally, Sodexho eliminates the responsibility and the burden of maintaining human resource management operations (such as maintaining employee payroll and benefits).

Saint Mary's College

Saint Mary's College's decision to fully outsource was primarily based on their dining services operations ability to serve a relatively small population of approximately

1,200 students and it was imperative to monitor population fluctuations. Similar to Kalamazoo College, Saint Mary's had contracted Sodexho for over 50 years. The dining services staff stated that the main reason that Saint Mary's had not renegotiated contracts was Sodexho continually produced fairly healthy profits. Furthermore, they stated that the majority of the risk was borne by Sodexho which was in the best interest of St. Mary's College. Also, the College did not have to pay dining services employee wages and benefits, Sodexho had that responsibility. The dining services staff stated that Sodexho provided a team (at operational and corporate levels) that provided trends analysis and the most up-to-date marketing strategy. They further stated that trend analysis (understanding eating habits of students) is very important, "listen to your target customer and make the students happy". Finally, Saint Mary's College's dining staff believed that the college could not have sustained dining operations over the past 50 years without the help from outsourcing (low risk and saves money).

Investigative Question #5

*5. Which **factors** do the Air Force consider important in the decision to outsource or not?*

Investigative question five was answered through interviews with the Air Force's A1SF food service staff using standardized interview questions (Appendix D). This section will answer which *factors* were important to the Air Force when deciding to outsource or not.

One of the key factors the team considered important was keeping up with the *ever changing base population*. They stated that the unique environment of sending airmen off to war on a moment's notice caused severe population fluctuations which resulted in constant forecasting challenges. Consequently, these challenges led to additional

problems such as poor quality of food, high operating costs, and low utilization rates. Furthermore, the Air Force was mandated by congress to draw down its military manpower end strength (force shaping). With an already small number of personnel on meal cards it had become increasingly harder to maintain Air Force dining facilities. The team stated that it would make sense to outsource dining operations when it became no longer feasible to feed a small populace of personnel.

Another key factor that the team faced was that the ***trends had shifted*** in what the Airmen were eating. Airmen were eating more franchise food; so much that utilization rates in dining facilities had significantly decreased. The Air Force's current feeding platform is considered antiquated by industry standards and resembles that of cafeteria-style dining facility. It would be beneficial to our customers to find a contractor that could come in with new, fresh ideas on how to better present the food. One method that we are discussing is to provide a concessionaire contract where the contractor provides their own capital and recoups a large part of the revenues. This would be an immediate cost savings as the AF would not have to outlay funds.

The team also considered ***military manpower and training requirements*** as a factor. Air Force food service personnel (military) were directed by the War Mobilization Plan (WMP), Volume 1 - Basic Plan and Support Annexes, Services Annex to be equipped and trained to deploy and execute their wartime mission (feeding the troops). This training was to be accomplished during peacetime at designated in-garrison bases. The team stated that when considering a fully outsourced dining facility, it would be imperative that military troops be assigned and trained in key dining facility staff positions to include manager(s), food service workers (all levels), and storeroom clerks.

In addition to fulfilling military requirements, a military member occupying a key dining facility staff position would provide a valuable Air Force perspective necessary to operate a military dining facility. Furthermore, some of the other military services (i.e. Army, Navy and Marines) have opted to contract foodservice operations as part of cost-savings programs. In return for the contracted personnel, they had to eliminate some of their military cooks. They have seen a reduced war-time capability to provide meals and are now trying to mitigate these issues. We cannot follow that same path as our current military cook population fulfils our go-to-war requirements.

Unfulfilled promises from outsourced contractors have proven to be a problem in the past. The AF/A1SF team had been in discussion with other food service operations (government and private sector) that had outsourced in the past. One of the repeated themes was that contractors made great promises and had shown initial, short-term cost savings, but in the long-run, the quality degraded and the costs escalated. The potential negative long-term effects were a major concern. Additionally, Air Force dining facilities provide quality-of-life programs such as Airmen Birthday Meals, Deployed Spouses Meals, and Holiday Meals. Contractors would be required to support and sustain these quality-of-life programs; and it would be considered unacceptable if they could not.

Investigative Question #6

*6. What **factors** do the Air Force and the six universities' share?*

This section will attempt to answer what similar *factors* do the Air Force and the six universities' share. Table 8 shows a graphical representation of the factors that are similar between Air Forces' and the six universities' feeding models.

Table 8. Air Force and University factors similarities

Factors	Ohio	Washington	Illinois State	Kent State	Kalamazoo College	Saint Mary's College	Air Force
Manpower and training requirements		X		X			X
Shifting trends			X	X		X	X
Population Fluctuations				X	X	X	X
Unfulfilled promises	X			X			X

Manpower and training requirements were a shared concern with the Air Force, Kent State University, and Washington University. The AF/A1SF team stated that when considering a fully outsourced dining facility, it would be imperative that military troops be assigned and trained in key dining facility staff positions to include manager(s), food service workers (all levels), and storeroom clerks. Washington University's dining services team stated that by attracting and retaining experienced managers and chefs this directly facilitated the improvement of the training problems. Furthermore, they stated that once your experience is outsourced it is extremely hard to obtain it back. Conversely, Kent State's dining services team was concerned that their managers (chefs and supervisors), which were mostly made up from the student populace, lacked the knowledge, marketing skills, and experience needed for a successful operation. Meaning that they felt the overall operation was good, but to take it to the next level they would

need to improve in the management area. Consequently, they outsourced (partnered) key management positions.

Shifting trends were a major consideration to the Air Forces, Saint Mary's College's, Illinois State University's, and Kent State University's dining programs. Airmen were eating more franchise food; so much that utilization rates in dining facilities had significantly decreased. It would be beneficial to our customers to find a contractor that could come in with new, fresh ideas on how to better present the food. Saint Mary's dining services staff stated that Sodexho provided a team (at operational and corporate levels) that provided trend analysis and the most up-to-date marketing strategy ("Big Brother" concept). They also stated that trend analysis is very important; listen to your target customer and make the students happy. Illinois State's dining services team stated that the staff partnered (licensed agreement) with franchises (i.e. Burger King, Pizza Hut and Chick-fil-A). This agreement allowed for the use of the university's meal plan. Also, Illinois State established a contract agreement with Subway and McDonalds where they accepted the university's meal card plan. Kent State specifically outsourced (partnered) key management positions in order to keep up with the latest customer trends.

Population fluctuations tend to drive institutions towards outsourcing. The AF/A1SF team stated that with the unique environment of sending airmen off to war on a moment's notice caused severe population fluctuations which resulted in constant forecasting challenges. The Air Force staff suggested that smaller numbers of meal card members resulted in poor utilization rates. Kent State University's dining staff stated that their feeding populace base is relatively small and population fluctuations (i.e. summer break) were a major concern. Kalamazoo College's dining services team believed that a

small student populace made outsourcing attractive. Finally, Saint Mary's college's dining services team stated when serving only 1,200 students it was imperative to monitor population fluctuations.

Unfulfilled promises from outsourced contractors were a major concern with the AF/A1SF staff. The staff had inquired with other food service operations (government and private sector) that had previously outsourced. The food service operation stated that they had many difficulties with the outsourced company. One of the repeated themes was that contractors made great promises and had shown initial, short-term cost savings, but in the long-run, the quality degraded and the costs escalated. Ohio University stated that their decision not to outsource was also based on their knowledge that contracting companies often promised to provide a certain level of quality and service, but seldom delivered. Kent State's dining services staff explained that they had to allow for an adjustment period (growing pains) they also stated that their partnership was eventually successful. Lastly, Kent State stated that it is very hard to make a partnership work "you have to want it".

Research Findings

The research findings suggests that key similarities exist (according to the three rated criteria and the four rated factors) between the Air Force's dining facility model and the six universities'/colleges' feeding models. Throughout the remaining portion of this study the criteria and the factors combined will be labeled as the *characteristics*. These findings are presented to identify which characteristics (total number in parentheses) the Air Force's feeding model and each of the six universities' feeding models share. The conclusion of the findings will further identify which university's feeding model shares

the most characteristics with the Air Force's feeding model. Furthermore, it can be theorized that the university feeding model that shares the most characteristics with the Air Force's feeding model is the one the Air Force should most examine when deciding to outsource or not.

Ohio University *(3 characteristics)*

The Ohio University's dining services team rated the overall operating cost and the quality of dining experience criteria nearly the same level of importance as that of the AF/A1SF's team. Also, Ohio's dining services team rated the unfulfilled promises factor nearly the same level of importance as that of the AF/A1SF's team.

Washington University *(1 characteristic)*

Washington University's dining services team rated the manpower/training requirements factor nearly the same level of importance as that of the AF/A1SF's team.

Kent State University *(7 characteristics)*

Kent State University's dining services team rated all three criteria overall operating cost, quality of dining experience, and skill of workers and managers nearly the same level of importance as that of the AF/A1SF's team. Also, Kent State's dining services team rated all four factors manpower/training requirements, shifting trends, population fluctuations and unfulfilled promises nearly the same level of importance as that of the AF/A1SF's team.

Illinois State University *(2 characteristics)*

The Illinois State University's dining services team rated the overall operating cost criteria nearly the same level of importance as that of the AF/A1SF's team. Also,

Illinois State's dining services team rated the shifting trends factor nearly the same level of importance as that of the AF/A1SF's team.

Kalamazoo College *(3 characteristics)*

Kalamazoo College's dining services team rated the overall operating cost and the skill of workers and managers criteria nearly the same level of importance as that of the AF/A1SF's team. Also, Kalamazoo's dining services team rated the population fluctuations factor nearly the same level of importance as that of the AF/A1SF's team.

Saint Mary's College *(2 characteristics)*

Saint Mary's College's dining services team rated the shifting trends and the population fluctuation factors nearly the same level of importance as that of the AF/A1SF's team.

Conclusion of Findings

Kent State University's feeding model shared the same seven characteristics with the Air Force's feeding model. Figure 10 is a Venn diagram that exhibits the shared characteristics between the each university's/college's feeding model and the Air Force's feeding model. Each University/College is represented by a circle that depicts how many characteristic are similar to the Air Force. Finally, it was concluded that Air Force's feeding model should most resemble that of Kent State's feeding model.

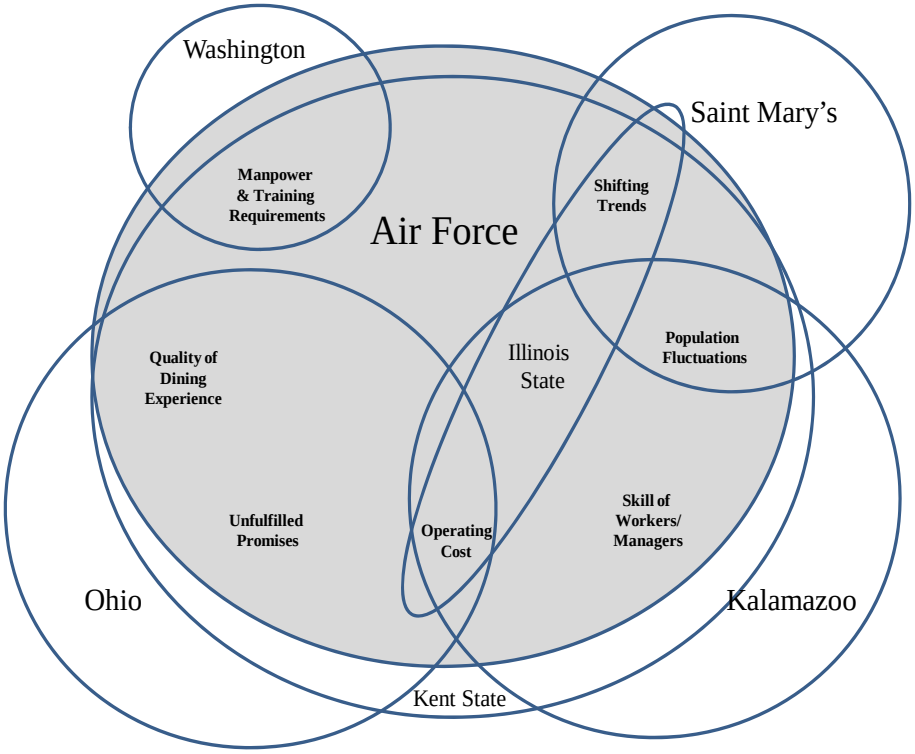

Figure 10. Venn diagram (Air Force and University/College shared characteristics)

Summary

The purpose of this chapter was to form the analysis and results of the case studies. This chapter analyzed six investigative questions that were devised to identify the shared criterion and factors (characteristics) between the Air Force's and Universities' feeding models. It was determined that the Kent State's feeding model shared the all seven characteristics with the Air Force's feeding model. The final conclusion was the Air Force's feeding model should most resemble Kent State's feeding model.

V. Conclusions

Overview

This chapter's overall focus is to address key areas of concern such as relevance, roles and responsibility, addressing the initial hypothesis, and research limitations. However, the main focus of this chapter is to address the research question, provide recommendations, limitations and bias, and then suggest future research studies.

Relevance

The relevance of this study is solely based on the necessity to change the way the Air Force feeds its Airmen. It is also relevant to pursue the feeding strategies of six university's due to the similarities between the university's and Air Force's demographics. Furthermore, the six universities, in the recent past, evaluated the advantages and disadvantages of outsourcing. The previous statements made it absolutely necessary and relevant to present this area of study and its conclusions to Air Force decision makers.

Roles and Responsibilities

Most respondents were eager to provide commentary and feedback regarding their perspective and experience when considering outsourcing. Furthermore, university/college respondents viewed their particular case as a success and were happy to provide the researcher with an in-depth evaluation. Air Force respondents were also very receptive to an evaluation on their perspective of outsourcing.

Addressing the Hypothesis

Hypothesis: *It was hypothesized that the Air Force's feeding model should resemble that of a fully outsourced campus feeding model.* This was based on the

premise that the Air Force wanted and needed to aggressively cut costs and improve quality.

As stated in the findings, it was ascertained that Kent State University's feeding model best resembled that of which the future Air Force's feeding model should resemble. Therefore, the initial hypothesis was incorrect.

Addressing the Research Question

Which universities'/colleges' feeding model, based on shared criteria and factors (characteristics), should the Air Force's feeding model most resemble?

After conducting the study, it was concluded that Kent State University's feeding model (partnership) shared the same seven characteristics with the Air Force's feeding model. The key characteristics that the Air Force's and Kent State's dining programs shared was the skill of *workers/managers* criterion and the *managerial and training requirements* factors. Kent state specifically outsourced to obtain the managerial knowledge and expertise. While the Air Force identified that it must retain military members in key positions (manager, cooks, and storeroom clerks) with the dining facility to maintain the capability and training to feed in a wartime/contingency environment. Another key shared characteristic was the *operating costs* criterion as they both identified the need to decrease operating cost to maintain operational efficiency. Evidence suggests that the Air Force's future feeding model should most resemble that of Kent State University's feeding model. Next, the recommendations will explain in depth why the Air Force's feeding model should most resemble that of Kent State's (partnership).

Recommendations

It is recommended that Kent State University's (partnership) feeding model is the feeding model the Air Force should most resemble in the future. Not only should Air Force's feeding model resemble that of Kent State's feeding model due to the sharing of the seven characteristics, but other areas of considerations should be noted to further justify this recommendation. Kent State's feeding model is considered a "partnership", (managerial contract). Additionally, Kent State was considered mostly self-operated; however, key managerial positions have been outsourced. The Air Force's feeding model should resemble that of a hybrid (co-sourced) feeding model. Specifically, the Air Force's feeding model should also resemble that of Kent State's **"partnership**" feeding model, with notable differences. Since the Air Force has to maintain the capability to train and equip military members for wartime tasks and yet still decrease operating costs, this feeding model should closely resemble a co-sourced feeding model that nearly boarders a fully outsourced feeding model (Figure 11). This would benefit the Air Force because the outsourced company would bear most of the operating costs but yet still retain military members, trained and equipped, in key dining facility positions (managers, chefs, storeroom clerks).

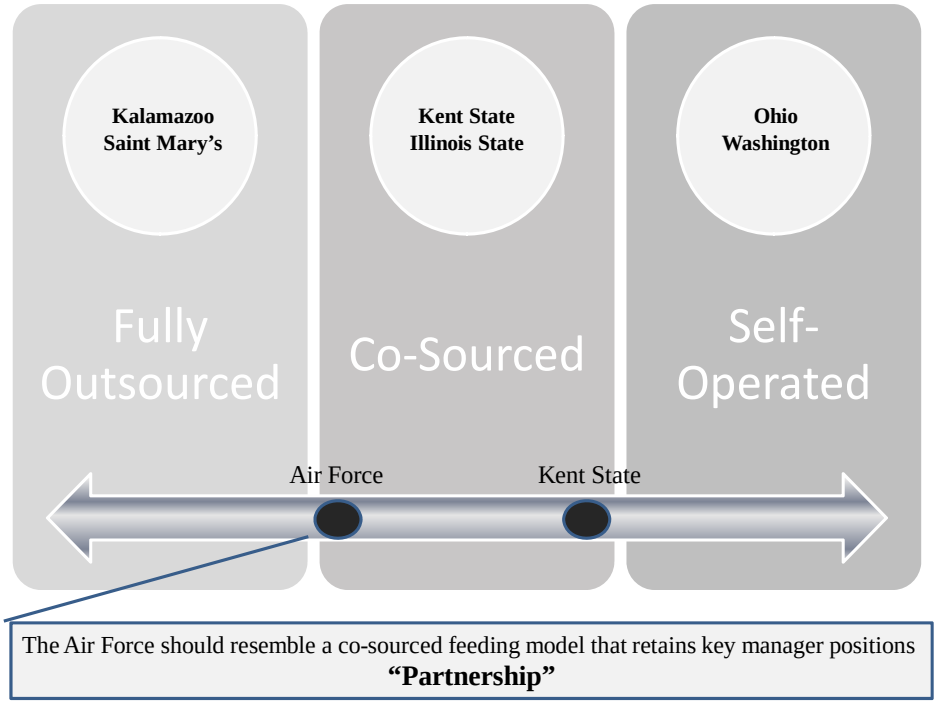

Figure 11. Recommended Decision

Research Limitations and Bias

During the course of this study, several limitations and issues were encountered that could have either introduced bias or limited the scope of research. This section will address each of these concerns:

1. Limitation of Sample Size

This research was limited to six universities/colleges. Within the six Universities/Colleges, only two represented each category of fully outsourced, co-sourced and self operated. The limitation of sample size restricted the scope of this research; meaning that several factors (i.e. political agendas, state and federal subsidies, and geographical location) were not taken into consideration.

2. University/college Bias

Each universities'/colleges' dining services team that was interviewed detailed their perspective with bias. Though most were very receptive to the interview they also stated their case based on their successes and little on their failures.

3. Researcher Bias

The researcher had over 15 years of military dining facility experience to include dining facility manager, military cook, and dining facility storeroom manager. The researcher's perspective though based on several years of experience could not be considered all encompassing (capturing only one point of view) when establishing a baseline for determining future Air Force dining facility operating environments.

Future Research

While conducting this study, three areas were noted that may be suitable candidates for future topics of research when considering outsourcing. First, Air Force bases may, based on the geographical area (within the CONUS or Overseas), have specific points of interest. Further research could be used to address these points of interest (i.e. restrictive state laws, availability of contractor support, Overseas Status of Forces Agreements (SOFA's), and International laws). Second, due to the limitation of the sample size (six universities/colleges), further studies could incorporate not only more campuses, but multiple campus institutions. This would allow for a wider scope of population to ensure all sizes and categories of campuses were represented. Finally, a study that experimented with test bases (Air Force bases worldwide) would need to be accomplished to truly understand outsourcing and the impacts of the make/buy decision process.

Conclusion

Air Force personnel expect their dining facility to foster an intimate environment that is conducive to building professional and personal relationships. By outsourcing most dining facility functions but retaining Air Force military personnel, the dining facility can dramatically reduce costs while maintaining both its capability and tradition. This should be accomplished by obtaining a hybrid co-sourced partnership. Specifically, the Air Force should outsource most dining facility operations, but preserve key food service managerial positions.

Appendix A

Rated Criteria

Four Major Categories
(13 sub-categories)

Instructions: Please rate each subcategory from 1-5 (5 being the most important).
Note: Please rate based on your (as the manager) decision to outsource/not outsource.
(i.e. how important was overall operating cost in your decision?)

Category 1: Costs
- A. Overall operating costs
- B. Price per plate (value)
- C. Availability of budget (or lack of budget)

Category 2: Employees & Management (Manpower)
- A. Overall skill of workers/managers
- B. Importance of training
- C. Relationship between workers and management
- D. Management Control

Category 3: Quality
- A. Overall quality of dining experience
- B. Variety/selection of food items (healthy heart, ethnic, brands, and quantity)
- C. Environment of eating establishment

Category 4: Convenience
- A. Location of eating establishment
- B. Speed of service
- C. Flexibility (i.e. requirement of at least three meal periods per day)

Please elaborate/modify as you see fit.

Thank you for your participation in this study.

V/r
SMSgt Troy Miller

Appendix B (University Interview Questions)

Interview Questions

Date/Time_____

Interviewee (name) _____ (Title) _____

Disclaimer: Hi, my name is SMSgt Troy Miller; I am a grad student at the Air Force Institute of Technology. I am in the middle of completing a thesis on "campus style feeding" and how it relates to the Air Force. The over-arching question I would like to answer is: "Why did you/your university decide to outsource/not outsource your food service operation?"

Questions:

1. How long have you been in your position? In your tenure what **general food service** changes have you endured? Please tell your story.

2. What have you done in response to these changes?

3. What are your lessons learned from the implementation of these changes?

4. In your situation, what do you consider as the major factors when determining to outsource or not outsource?

5. How would you rate these criteria as a matter of importance on a scale of 1-5, five being the most important?

6. Were thresholds established that affected whether or not to outsource (i.e. number of students on a feeding plan)

7. Since I am in search of the following three categories of "Campus Style Feeding Models": 1) fully outsourced, 2) co-sourced and 3) not outsourced at all, is there a campus that you would recommend I contact/research? If so, would you happen to have their contact information (name, phone number and email address)?

I sincerely appreciate your participation in my thesis efforts. In no way, will I bring discredit to you and your university. My goal is simply to equip Air Force decision makers with "campus style feeding models" and then demonstrate how these models compare to the Air Force's existing feeding model.

Sincerely,
SMSgt Troy Miller

Appendix C

Rated Criteria
Four Major Categories
(13 sub-categories)

Instructions: Please rate each subcategory from 1-5 (5 being the most important).
Note: **Please rate based on your (as an AF decision maker) decision to outsource/not outsource. (i.e. how important was overall operating cost in your decision?)**

Category 1: Costs
- A. Overall operating costs
- B. Price per plate (value)
- C. Availability of budget (or lack of budget)

Category 2: Employees & Management (Manpower)
- A. Overall skill of workers/managers
- B. Importance of training
- C. Relationship between workers and management
- D. Management Control

Category 3: Quality
- A. Overall quality of dining experience
- B. Variety/selection of food items (healthy heart, ethnic, brands, and quantity)
- C. Environment of eating establishment

Category 4: Convenience
- A. Location of eating establishment
- B. Speed of service
- C. Flexibility (i.e. requirement of at least three meal periods per day)

Please elaborate/modify as you see fit.

Thank you for your participation in this study.

V/r
SMSgt Troy Miller

Appendix D (Air Force Interview Questions)

Interview Questions

Date/Time_____

Interviewee (name):_____(title)_____

Disclaimer: Hi, my name is SMSgt Troy Miller; I am a grad student at the Air Force Institute of Technology. I am in the middle of completing a thesis on "campus style feeding" and how it relates to the Air Force. The over-arching question I would like to answer is: "What factors do you view as important when deciding to outsource/not outsource Airmen Dining Facilities?"

Questions:

1. How long have you been in your position? In your tenure what **general food service** changes have you endured? Please tell your story.

2. What have you done in response to these changes?

3. What are your lessons learned from the implementation of these changes?

4. In your situation, what do you consider as the major factors when determining to outsource or not outsource?

5. How would you rate these criteria as a matter of importance on a scale of 1-5, five being the most important?

6. What thresholds would you consider important when deciding whether or not to outsource (i.e. number of students on a feeding plan)

Sincerely,

SMSgt Troy Miller

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Vita

Senior Master Sergeant Troy J. Miller graduated from Marshall High School in Marshall, Michigan. He entered undergraduate studies at National American University in Rapid City South Dakota. In Mar 2004, he graduated cum laude with a Bachelor of Science degree in Business Management. At that time, he was assigned to 16th Air Force (NAF) in Aviano AB, Italy where he was the Services Element Planning Chief. During this assignment he deployed in support OPERATION IRAQI FREEDOM to Al Udeid Air Base, Qatar as the Food Services Superintendent. In Aug 2006 he entered the Graduate School of Engineering and Management, Air Force Institute of Technology. Upon graduation, he will be assigned to the Air Force Services Agency (AFSVA) in San Antonio, Texas.

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14. ABSTRACT

Air Force dining facilities are stressed world wide as a result of PBD 720 driven military force reductions, loss of personnel due to deployments, as well as reduced appropriated funds to fund mess attendant contracts, equipment replacement and facility maintenance and repair. This research looks at outsourcing as an innovative method that would provide Air Force decision makers with solutions when considering outsourcing its dining facilities. The fit of the co-sourced feeding model at Kent State suggests that the Air Force would benefit from a similar co-sourced feeding model in its dining facility operations.

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