BENCHMARKING THEORY APPLIED TO STATE PARKS: AN EXPLORATORY STUDY

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Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
In partial fulfillment of
the requirement for
the Degree of
DOCTOR OF PHILOSOPHY
December, 2004

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ACKNOWLEDGEMENTS

This journey has been a wonderful and challenging learning experience. I wish to acknowledge and thank everyone who guided and supported me through this journey.

Most of all, I wish to acknowledge and express my deepest gratitude to my advisor, Dr. Lowell Caneday for his exceptional guidance, insight, knowledge, and support, not only for this study, but also throughout the course of my doctoral study. I wish to thank him for allowing me to take on this project. This study would not have been possible without Dr. Caneday's patience, timely feedback, and mentoring. It was my privilege to have been one of his students.

My sincere appreciation also goes to Dr. Deb Jordan. Dr. Deb Jordan was extremely supportive to my study and gave me tremendous direction. She has always given me her guidance, knowledge and advice so generously.

I also wish to express my gratefulness to Dr. Chris Cashel, not only for her continuous support and encouragement, but also for her warmth and kindness. It has been a joyful experience to work for her and learn from her.

In addition, I would also like to thank Dr. Hailin Qu. I appreciate deeply for his willingness to serve on my committee and his valuable suggestions and comments on this study.

This project is not an endeavor of one individual. I wish to thank all the individuals at each of the benchmarked agencies for sharing their knowledge and experiences. A special thank-you goes to the Oklahoma Tourism and Recreation Department for their financial support for this project.

Lastly, but not least, I wish to thank my family: my parents, my brother, and sister-in-law, for their constant love, support, and encouragement on every step of the way. They are the pillar of my strength. This is for them.

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CHAPTER I

INTRODUCTION

Overview

The state parks in the United States are an important resource for providing outdoor recreation opportunities to the American people and other visitors (McLean, 1998; McLean, Chavez, & Knapp, 1999). In 2000, there were 786 million visitors to state parks, over twice as many people as those who visited national parks. State parks represent less than 2% of the total outdoor recreation by acreage, but receive over 29% of all visitors (National Association of State Park Directors, n.d.). By 2001, the total acreage of state parks lands was close to 13 million acres (U.S. Census Bureau, 2002).

Planning and operating a modern state park program is challenging nowadays. "The demand on outdoor recreation areas of every kind has been increasing faster than the supply of land and facilities needed to accommodate the demand. Budgets are perennially inadequate, and recreation land acquisition invariably falls short of projected needs" (Sharpe, Odegaard, & Sharpe, 1994, p.1). State park managers and administrators must deal with complex issues that affect the quality and efficiency of the services and operation of state parks. For example, the development of state parks has been under tremendous pressure due to the budget crises in many states (McLean & Milliken, 2003). Insufficient funding has been plaguing state parks and continues to be a critical issue in the development of state parks (Landrum, 1999). State park agencies are expected to do more with less. Therefore, it is critical to improve the operation efficiency and effectiveness of state park agencies by adopting advanced

management skills. State park agencies need effective means to critically examine themselves and learn from the experiences from their counterparts. Benchmarking is such a valuable tool that can be utilized by state park agencies to improve management quality and efficiency through learning outstanding practices from others. Benchmarking is a systematic and continuous process of searching for the best practices that lead to superior performances (Camp, 1989; Camp 1995). It is "an integral part of the planning and ongoing review process to ensure a focus on the external environment and to strengthen the use of factual information in developing plans" (Camp, 1995, p.15).

Background of the Study

In May 2003, the Oklahoma Tourism and Recreation Department (OTRD) contracted with the Leisure Studies program at Oklahoma State University to perform an evaluation of Okalahoma State Parks. Policy-makers would use this evaluation to guide the future planning and development of Oklahoma State Parks. There were four components of this evaluation, with a benchmarking study as one of the major components. The other three components included a statewide recreational facility assessment; a recreation needs assessment; and a plan of action. The goal of the benchmarking study was to choose five or six comparable state park systems in the United States to discover the outstanding practices regarding recreation services and facilities in state park systems.

Benchmarking is a useful tool in the process of strategic planning for gathering information in areas such as the state of art services, development patterns, and trends that are important in strategic planning (Spendolini, 1992). Benchmarking is a technique that organizations use as an element of planning to set organizational goals based on external standards that are challenging, yet realistic and achievable. This

benchmarking study was to help Oklahoma Tourism and Recreation Department (OTRD) position the Oklahoma State Parks to address future challenges and opportunities.

Purpose of the Study

The primary purpose of this study was to understand the benchmarking process in public parks, recreation, and leisure services settings, especially its use in state park systems. A benchmarking process model that is appropriate for benchmarking state park systems was developed and tested through the study. The literature of using benchmarking technique in private businesses is abundant (Boxwell, 1994; Camp, 1989; Camp1995; Bogan & English, Czarnecki, 1999; Codling, 1992; Spendolini, 1992; Watson, 1993). The literature about the use of benchmarking technique in public and governmental agencies has been increasing in recent years (Bruder & Gray, 1994; Coe, 1999; Keehley, Medlin, MacBride, & Longmire, 1997), but the benchmarking literature in public recreation and leisure services has been almost non-existent. One article in the *Parks & Recreation* magazine on the subject of benchmarking was discovered; (Miles, 1994), yet no actual research on benchmarking in public recreation and park services has been found in professional scholarly journals. This study explored the application of the benchmarking technique in state park systems by using the Oklahoma State Parks and five other state park systems as examples.

As the first benchmarking study in state park systems, this study may provide an example for the managers of state park agencies to start utilizing benchmarking as a management tool to improve the operation of state parks in the future. The study may serve as a guide that identifies the process of how to conduct a benchmarking study in state park systems, which may assist the directors or managers of state park

systems to conduct similar benchmarking studies in the future.

Research Design

Since the purpose of this study was to explore the application of benchmarking technique in state park systems, the research process was to build a benchmarking process model and test this process model in the study. The benchmarking process model is a set of steps that describe the detailed process of how to conduct a benchmarking study. The benchmarking process in this study followed these steps, with the first six steps as the emphases of the study:

1. A Delphi technique was employed to identify the critical factors that can be benchmarked in state park systems. An expert panel, consisting of twelve members from the National Association of State Park Directors (NASPD), was invited to identify these benchmarking performance measures.
2. A K-means cluster analysis was utilized to identify appropriate benchmarking partners in the study. The data used in the cluster analysis were based on 30 selected factors, characterizing the property composition, visitors, operations, and personnel of the 50 state park systems in the United States, from the 2004 Annual Information Exchange (AIX) provided by the National Association of State Park Directors.
3. An internal self-administered questionnaire was conducted within the Oklahoma Tourism and Recreation Department to make the final determination of the benchmarking measures and the benchmarking partners.
4. Collaborations were gained from the benchmarking partners.
5. A benchmarking survey was conducted to collect detailed information on the operation and management of both Oklahoma State Parks and that of

the benchmarking partners.

6. The benchmarking results were analyzed and recommendations were made.
7. Benchmarking findings were communicated to the Oklahoma Tourism and Recreation Department and the benchmarking partners. This was not the focus of the study.
8. The benchmarking results will be implemented in the operation and management of the Oklahoma State Parks. However, this was not a part of this study due to time and resource constraints.

Assumptions

The following assumptions were recognized in this study.

It was assumed that members of the National Association of State Park Directors had the expertise in the management of state park systems. Therefore, the benchmarking measures suggested by them were the critical factors in measuring the performance of state park systems.

It was assumed that the practices of the chosen benchmarking partners could be adapted and implemented in the management and operation of the Oklahoma State Parks.

The surveys conducted in this study were self-reports. It was assumed that these self-reports were unbiased and accurate.

Limitations

There were several limitations identified in this study.

The participants of the Delphi study were voluntary. Their suggestions might not include all the important benchmarking performance measures that could be included in evaluating state park systems.

The participants of this study were mainly the practitioners in the parks and

recreation field and the benchmarking performance measures suggested by the participants in the study were mainly from the practical perspectives. These measures might not reflect all the social trends.

The researcher chose the factors used in the cluster analysis. The factors were partial of the entire data on state parks, which may not represent all the characteristics of state park systems.

The implementation of benchmarking results is important in the success of a benchmarking study. However, because of time and resource constraints of the study, the implementation of benchmarking study was not a part of this study. However, recommendations on how to implement the findings of the study were included in this study.

Delimitations

The researcher should establish certain boundaries concerning the specific population of a study (Baumgartner & Strong, 1994). The following delimitations were recognized.

Only the Oklahoma State Parks and their chosen partners (the state park systems that agreed to participate in the study) were studied. Only those benchmarking performance measures identified in this research were examined.

Research Questions

There were eight research questions in this study:

1. Is benchmarking applicable in state park systems as a means of improvement in the process of state parks management?
2. Is benchmarking applicable in the Oklahoma State Parks as a means of improvement in the process of state parks management?
3. What are the important benchmarking performance measures that can be

used in benchmarking study in state park systems?

4. Which state park systems are the appropriate benchmarking partners for Oklahoma State Parks?
5. What is the status of the Oklahoma State Parks in terms of the performance measures used in this benchmarking study?
6. What specific areas were the benchmarking partners better than the Oklahoma State Parks in terms of operation and management?
7. What benchmarking process model can be developed that is appropriate for benchmarking state park systems?
8. What changes that the Oklahoma State Parks should make to incorporate the practices learned from the benchmarking partners?

Definition of Terms

The specific vocabularies used in the discussion of this research were defined for clarity and explanation of the research. The following terms were the major concepts used in this study:

Benchmark. As a noun, it is a sighting point from which measurements could be made or a standard against which others could be measured (Bogan & English, 1994, p.3). In quality improvement lexicon, a benchmark is a "best-in-class" achievement and this achievement becomes the reference point or recognized standard of excellence against which similar processes are measurement (American Productivity & Quality Center [APQC], 1993, p.4). As a verb, it means to systematically identify and learn from best practices, internal or external, in order to improve your own performance (O'Dell & Grayson, 1998, p. xiv).

Benchmarking. A continuous, systematic process for evaluating products, services,

and work processes of organizations that are recognized as representing best practices for the purposes of organizational improvement (Spendolini, 1992, p. 9).

Performance measure. The process of quantifying the operation process, program, or any other activities through which a public agency delivers products or services to its customers (Keehley et al, 1997, p.31).

Total Quality Management (TQM). An overall philosophy whose objective is to meet or exceed the needs of the internal and the external customer by creating an organizational culture in which everyone at every stage of creating the product as well as every level of management is committed to quality and clearly understands its strategic importance (Youseff, 1994, p.6).

Park. Tracts of tax-supported land and water, established primarily for the benefit and enjoyment of the public and maintained essentially for outdoor recreation activities (Sharpe, Odegaard & Sharpe, 1994, p.4).

State Park. Areas contain a number of coordinated programs for the preservation of natural and/or cultural resources and provision of a variety of outdoor recreation opportunities (McLean, 1998, p.2).

Delphi Technique. A method for the systematic solicitation and collation of judgments on a particular topic through a set of carefully designed sequential questionnaires interspersed with summarized information and feedback of opinions derived from earlier responses (Delbecq, Van de Ven & Gustafson, 1975, p.10).

Organization of the Study

A review of literature is presented in the following chapter, which includes a discussion of benchmarking technique, state parks, and the Delphi technique. Chapter

III presents an overview of the research framework, which describes the eight steps of the benchmarking study process. The methodology used in each step of the benchmarking study is also discussed. Chapter IV discusses the findings of the benchmarking study, which includes the processes of determining benchmarking partners and benchmarking performance measures, and analyses of the collected data. Chapter V address the implications of the research findings, description of the benchmarking model for this study, recommendations to Oklahoma State Parks on the implementation of the findings, and the implication for future research.

CHAPTER II

REVIEW OF LITERATURE

Overview

Three major topics are reviewed in this section. The first section endeavors to help readers have a better understanding of the benchmarking technique. First, the theoretical foundations of benchmarking are explained, including organizational learning theory, Continuous Quality Improvement (CQI) theory and Total Quality Management (TQM) theory. Second, an explanation of "benchmark" and "benchmarking" as well as the history of benchmarking are presented. Then, types of benchmarking and benchmarking models are discussed. Additionally, the principles of benchmarking and benefits of benchmarking are identified, followed by the discussion of the processes of how to conduct a benchmarking study.

Benchmarking technique originates from private business industries. However, this research was a benchmarking study in public/government agencies. Thus, a discussion on how benchmarking is implemented in the public sector is included. Finally, status of benchmarking studies in parks, recreation, and leisure setting are discussed.

The second section focuses on the history and development of parks and state parks in the United States. The development of national parks is examined, followed by the discussion of the development of state parks. Finally, the history and development of the Oklahoma State Parks are reviewed. Lastly, Delphi technique is discussed as one of the research methods utilized in this study.

Theoretical Foundations of Benchmarking

Organizational Learning Theory

Organizational learning is "about the effective processing, interpretation of, and response to, information both inside and outside the organization" (Easterby-Smith & Araugo, 1999, p.3). Organizational learning theory is based on the assumption that learning leads to improvement. As Huber (1991) stated, "An entity learns if, through its processing of information, the range of its potential behaviors is changed… an organization learns if any of its units acquires knowledge that it recognizes as potentially useful to the organization" (p.89).

People learn from two basic ways. One is from their own experiences and the other way is to learn from others (Tobin, 1998). Tobin (1998) also suggests that experience is the basis and major source of human knowledge, which leads to human development. However, the accumulation of knowledge is not solely dependent on one's own experiences. Others' experiences are important for knowledge formation. The strategy of learning from others' experiences has always been a basic strategy of knowledge formation. "The ability to take advantage of others' experience to build up one's own body of knowledge is one of the most important sources of human and social development" (Karlöf, Lundgren, & Froment, 2001, p.60). Benchmarking is exactly such a learning tool. "There is a new spirit of collaboration among organizations that is a recognition that there is much one organization can learn from another. In the corporate world this collaboration is manifested in an increase in benchmarking…" (Dixon, 1999, p.115).

The power of learning from good practices guides the search for knowledge in a given direction (Karlöf, Lundgren, & Froment, 2001). The desire to use the best practice in a given field as a source of inspiration and point of comparison provides

input for the effective transfer of knowledge. Furthermore, application of good practices strengthens the learning ability of an organization in the area of knowledge to be transferred. In addition, analyses and dialogues with good practices increase an organization's receptivity to new knowledge. If an organization is completely relying on its own, it may not be able to achieve the solutions and systems that it needs to arrive at a closer understanding of different processes and connections between actions and results. By comparing a partner's experiences to one's own, an organization can substantially increase new knowledge, which may lead further development of the organization.

Organizational learning takes place in two complementary places: inside the organization and outside the organization (Peter, 1996). The organizational learning process inevitably focuses on the inside of the organization, where the emphasis is on trying to make the existing ways even better. More importantly, organizational learning should also take place by comparing one's own organization with other leading organizations, which is "a key characteristic of the learning organization". "It can help members of an organization to 'see' things, in the light of how other well-managed firms do it. This provides useful insight into what works well elsewhere and, hopefully, a better understanding of why" (Peter, 1996, p.11).

Huber (1991) suggests that the observation and analysis of other organizations provides a rich source of organizational learning. As organizations discern differences in the performance of similar organizations, they can focus their efforts on leveraging existing knowledge through transfers of best practice.

Benchmarking as a learning tool helps to spread useful practices among organizations (O'Dell & Grayson, 1998). Otherwise, even the best practice will only have local benefit. "…benchmarking… is a method of learning how to learn, and a

key component of knowledge creation, adaptation, and implementation" (O'Dell & Grayson, 1998, p. xiv). Spendolini (1992) concurred, " it is important to remember that behind all of the planning and organizing and analyzing activities that define the benchmarking experience lie the fundamental objectives of learning something new and bringing new ideas into an organization" (p.15).

Szarka, Grant and Flannery (2004) conducted a study at a large, international electronics company, which was a Fortune 200 company, to examine the mechanisms used to achieve organizational learning. The results of the study showed that benchmarking was one of the most prevalent methods of knowledge acquisition employed by the company. Pemberton, Stonehouse and Yarrow (2001) analyzed data of benchmarking studies based on 280 companies and 448 service sectors in Britain to examine the relationship between organization learning and benchmarking. The study results indicated that most of the organization learning factors were significantly associated with benchmarking.

Social Comparison Theory

Leon Festinger developed social comparison theory in the 1950s (Suls, 1977; Suls & Wheeler, 2000). According to social comparison theory, people have a need to evaluate their own performances and capabilities. They do so by comparing themselves against objective standards, and by comparing themselves with others when objective standards are unavailable (Festinger, 1954). Festinger (1954) also proposed the similarity theory in social comparison. The similarity theory suggests that similar others can provide useful and accurate information. People choose similar others as references not only to make accurate comparisons, but also seek to improve themselves so that they will exceed the standards. People need use social comparison to interpret their own performances (Greve, 2003).

Collins (2000) further proposed an upward assimilation theory in social comparison. The upward assimilation theory suggests that comparison process involves a search for similarities. One of the motivations that people choose to compare with someone who is superior is for the self-evaluative and self-improvement needs. Greve (2003) suggests that organizational performances can be compared in similar ways as individual performances". Greve (2003) further explained that the process of using comparable information of other organizations resemble the social comparison process in individuals. This process is called a "social aspiration level" (p.45). Organizations forming a social aspiration level choose suitable reference groups and observe the performances of their competitors or counterparts. The reference group is often composed of the companies or organizations whose size and proximity make them important to the organization that makes comparison.

Continuous Quality Improvement (CQI) Theory

There are two major management theories that are interrelated to benchmarking: Continuous Quality Improvement (CQI) theory and Total Quality Management (TQM) theory. DiBella (2001) suggests that both the Continuous Quality Improvement theory and the Total Quality Management theory are about learning to get better at what an organization already does through small incremental improvements. "This type of learning occurs through the close and continuous monitoring and analysis of one's own work processes" (p.5).

According to Obloj, Cushman and Kozminski (1995), the Continuous Quality Improvement theory, referred as the Continuous Improvement theory, mainly came from both technical knowledge and practical knowledge that enables managers to analyze an organization's environment to gain competitive advantage, to analyze an

organization's efficiency and effectiveness, and to develop strategies superior to competitors and counterparts. "Technical knowledge is anchored in the description and explanation of processes" (Obloj, Cushman & Kozminski 1995, p.24). Practical knowledge is "…empirically verifiable, local theories about how to perform managerial and other tasks. It therefore concentrates on the analysis of specific organizational processes and their effect…" (Obloj, Cushman and Kozminski, 1995, p. 24). As Obloj, Cushman, and Kozminski (1995) summarized, "… a continuous improvement theory is a harmonious blend of general assumptions and principles, hard frameworks offered by technical knowledge and practical applications resulting from action research, consulting interventions, and case study analysis" (p.24).

Five elements form the basis of Continuous Quality Improvement theory and benchmarking is one of the major elements (Obloj, Cushman, and Kozminski, 1995). The other four elements are self-managed teams for improvement of the functioning of work units, cross-functional teams for process mapping and improvement, strategic linkages for internal and external co-alignment, and creative breakthroughs. These elements address the three determining factors for the success of an organization: attainment of competitive advantage; development of organization-specific knowledge to improve and sustain market position; and constant adaptation and innovation. Benchmarking, a continuous improvement process, represents one of the ongoing efforts by an organization to increase its competitive advantage in a changing environment.

Total Quality Management Theory

Definition

Another theory that is similar to the Continuous Quality Improvement theory is the Total Quality Management (TQM) theory. The foundation of TQM philosophy

came from management experts such as W. Edward Deming, Joseph Juran, and Phillip Crosby (Hunt, 1993; Koehler & Pankowski, 1996; Morgan & Murgatroyd, 1994). Deming-based TQM is one of the most influential and widespread quality systems (Swiss, 1992). Japan first adopted W. Edward Deming's quality system enthusiastically. TQM helped Japan tremendously in their industries such as electronics and automobiles outperforming their counterparts in America after World War II. American businesses began to use TQM in the 1960s.

TQM is built in the assumption that organizational success depends on satisfying the expectations of current clients and on continually improving the organization's products and services (Harrison & Shirom, 1999). Coopers & Lybrand's U.S. Center of Excellence for Total Quality Management defines TQM as "Involving everyone in an organization in controlling and continuously improving how work is done, in order to meet customer expectations of quality" (Carr & Littman, 1993, p.3). Similarly, Youseff (1994) suggests that TQM is a comprehensive management philosophy. TQM is "an overall philosophy whose objective is to meet or exceed the needs of the internal and the external customer by creating an organizational culture in which everyone at every stage of creating the product as well as every level of management is committed to quality and clearly understands its strategic importance" (p.6). Moreover, TQM is not only a management philosophy, but also a sophisticated management system. "TQM is a management system embracing a set of beliefs and principles designed to empower all associates to continually improve organizational processes with the goal of meeting or exceeding customer expectations" (Koehler & Pankowski, 1996, p.15). TQM concentrates on improving the structural, infrastructural, attitudinal, behavioral, and methodological ways of satisfying the end customers, with emphasis on: consistency, improvements

in quality, and competitive enhancement (Zairi & Youseff, 1995).

There are four major differences between traditional management theory and the TQM theory in terms of management structure, quality insurance, individual performance, and innovations (Carr and Littman, 1993). TQM is very different from traditional hierarchical management structure such as Frederic Taylor's scientific management theory and Theory X management that requires centralized and hierarchical management. TQM is based on Theory Y management, which assumes all people have a natural drive for accomplishment and improvement. TQM management structure is much flatter and more flexible. Authority is decentralized and managers and employees work together.

Traditional management engages in quality control after products are made. TQM focuses on improving processes that make products and services defect-free, which eliminates the need to inspect defects afterward.

Traditional management focuses on individual performance to evaluate the efficiency and effectiveness of an organization. TQM focuses more on the improvement of the whole management systems rather than just individual performances.

TQM emphasizes continuous improvement, which is similar to the Continuous Quality Improvement theory discussed earlier. TQM combines both small but regular gains made by daily attention and creative breakthroughs to maximize the results from innovations.

TQM in Public Sector

Although TQM originates from processes in manufacturing industries, the original manufacturing nature of TQM does not exclude its application to agencies in the public sector. The essentials of TQM apply across industries. In manufacturing,

TQM is a vehicle for reducing the variation in product processes to achieve consistency in product quality. For service providers in the public sector, it is important to maintain consistent quality of services to clients. The elimination of quality-defeating variations is the same across industries. Yet, adjustments and adaptations should be made when applying TQM in public sector (Deming, 1986; Kennedy & Young, 1989; Swiss, 1992; Morgan & Murgatroyd, 1994).

One of the major differences between the TQM principle in private businesses and public agencies is the focus of quality improvement efforts. In private businesses, quality improvement focuses on inputs and processes rather than outcomes. TQM requires continuous improvement directed at inputs and processes rather than outputs. This needs major adjustment when applying in public agencies. For example, in government agencies, quality improvement needs to focus on outcomes rather than inputs and processes (Osborne & Gaebler, 1992; Swiss, 1992; Performance management, benchmarking and reengineering within government, 1995).

TQM & Benchmarking

Benchmarking is one of the major principles and elements in TQM (Morgan & Murgatroyd, 1994). One of the critical steps of implementing quality programs is to benchmark services or products (Hunt, 1993). Benchmarking is a significant element of the quality management technique. A basic element of TQM is the use of measurement processes and feedback to increase performance (Deming, 1986). Performance measurement is one of the major characteristics of benchmarking. Both TQM and benchmarking in public sector need to shift the focus to outcomes to increase the efficiency and effectiveness of organizational operation. When public agencies are forced to define and measure outcomes, they have to define appropriate benchmarks and clear outcomes. If an organization does not measure results and

cannot identify the factors for success, they will not be able to learn from success.

Benchmarking Theory

Definition of Benchmark

The origin of benchmarks can be traced back thousands of years ago in Egypt (Codling, 1992). In construction work, the Egyptians cut a notch in a stone at an accurately determined point, and a flat strip of iron would be placed horizontally in the incision to act as the support (bench), which would be used as the reference (mark) to measure additional heights and distances. Therefore, the word "benchmark" comes from geographic surveying and construction, which means to take a measure against a reference point to determine one's current position (APQC, 1993; Bogan & English, 1994; Harrington & Harrington, 1996). It is a sighting point or a standard against which others can be measured.

In the 1970s, the concept of benchmarking evolved beyond a technical term representing a reference point (Bogan & English, 1994). The use of benchmarking expanded to the business world, where it began signifying the measurement processes of conducting comparisons. In quality management lexicon, benchmarks are usually referred as "industry standards" (Camp, 1995). Benchmarks could be descriptive and/or quantitative. Descriptive benchmarks are "any work process made up of inputs, a repeatable set of steps based on a set of practices or methods, and outputs" (Camp 1995, p.18). Quantitative benchmarks are also called "performance measurements", which are the conversion of benchmarking practice to operational measures. The American Productivity and Quality Center (APQC,1993) further explained that benchmarks are more than ordinary standards; they are "best-in-class" achievements, which become a recognized standard of excellence against which similar processes are measured, compared, and evaluated.

Definition of Benchmarking

Benchmarks are the measurement to gauge a performance that can demonstrate performance gaps, but they do not explain why these gaps exist (APQC, 1993; Bogan & English, 1994). Therefore, a systematic investigation is needed to determine the reasons behind the gaps. This involves the utilization of the technique of benchmarking.

One of the early formal definitions of benchmarking derived from experiences and successes of the application of benchmarking technique in private business world. David T. Kearns, the former Chief Executive Officer of Xerox Corporation said, "Benchmarking is the continuous process of measuring products, services and practices against the toughest competitors or those companies recognized as industry leaders" (Camp, 1989, p.10). Xerox, which is one of the pioneers in modern benchmarking practice, defines benchmarking in a similar way. Xerox's benchmarking definition is "a continuous, systematic process of evaluating companies recognized as industry leaders, to determine business and work processes that represent 'best practices' and establish rational performance goals" (Cross & Iqbal,1995, p.4; Zairi, 1998, p.13-14). Robert C. Camp, one of the foremost benchmarking experts and a former Xerox manager proposed a similar, but a shorter definition, "benchmarking is the search for industry best practices that lead to superior performance" (Camp, 1989, p.12).

After collecting 49 definitions of benchmarking from 57 companies, Spendolini (1992) defines benchmarking as "a continuous, systematic, process for evaluating products, services, and work processes of organizations that are recognized as representing best practices for the purpose of organizational improvement" (p.9). The definition of benchmarking used by Bogan and English (1994) is, "…the systematic

process of searching for the best practices, innovative ideas, and highly effective operating procedures that lead to superior performance" (p.1).

Another British benchmarking expert, Codling (1992) defines benchmarking as "an ongoing process of measuring and improving products, services, and practices against the best that can be identified worldwide". Czarnecki (1999) characterizes benchmarking as "…a performance measurement tool used in conjunction with improvement initiatives; it measures comparative operating performance of companies and identifies the 'best practices'" (p.156).

Benchmarking is also defined as "…a process for identifying and importing best practices to improve performance" (Keehley, MacBride, & Longmire, 1997, p.39). Fischer (1994) refers benchmarking as "comparing the performance of your agency with that of others with outstanding performance to find fresh approaches and new ideas" (p. S2). Bruder and Gray (1994) see benchmarking as " a rigorous yet practical process for measuring your organization's performance and processes against those of best-in-class organizations, both public and private, and then using this analysis to improve services, operations, and cost dramatically" (p. S9).

Although the above definitions are slightly different, the essences of these definitions are the same. There are several characteristics of benchmarking. Benchmarking is measuring and comparing against "the best". Benchmarking concentrates on achieving superior performances. "It is only this view that will ensure superiority rather than parity" (Camp, 1989, p.13). Benchmarking is a continuous process, and it is not a one-time activity. Benchmarking should be incorporated into the culture of an organization and it requires constant update since the external best practices may change over time. Moreover, benchmarking is a systematic process. Benchmarking is a structured methodology that requires systematic data collection

and investigation. It is an integrated, systematic, measured approach.

Another common element about benchmarking is that benchmarking has both internal and external dimensions (Zairi & Ahmed, 1999). Internally, an organization must critically examine itself in order to identify the gaps between its operation and the best practices. More importantly, benchmarking has an external dimension where an organization searches within or outside the industry to identify external and competitive benchmarks and practice, which may be implemented in one's own operational environment. Therefore, benchmarking helps organizations focus on the external environment to keep up with changes in a rapidly changing world to survive (Codling, 1992).

In the real world, the ideal type definition of benchmarking, the "world class product, services, or work process" may need to be modified because such products or services may never be found due to limited resource, costs, time, and other factors. Sometimes, only relative or local optima may be found as benchmarks. Therefore, Kouzmin, Loffler, Klages, and Korac-Kakabadse (1999) suggest that benchmarking is a continuous and systematic process against organizations that are superior with the goal of rectifying the performance gaps. Benchmarking is a process that permits setting realistic performance goals in the context of the external business environment by incorporating not only best, but also feasible practices into operations. Similarly, the working definition of benchmarking by the American Productivity & Quality Center's International Benchmarking Clearinghouse is "… the process of continuously comparing and measuring an organization with business leaders anywhere in the world to gain information which will help the organization take action to improve its performance" (APQC, 1993, p.4).

History of Benchmarking

Many people have suggested the origins of concepts of benchmarking (Bogan & English, 1994; Camp, 1989; Codling, 1992; Harrington & Harrington, 1996; Zairi, 1998). From a historical perspective, the idea behind benchmarking: learning from others is not new. For centuries, people have observed those good ideas and practices around them, then adopted those ideas into their own practices to meet their own needs and improve themselves.

The benchmarking concept could be traced back to 2500 years ago by a Chinese general and strategist, Sun Tzu, who said, "If you know your enemy and know yourself, you need not fear the result of a hundred battles" (Camp, 1989, p.3). Applying this concept to business situations implies that the crucial elements for the survival and development of an organization are its full awareness of not only its internal functioning, but also its external environment (Qayoumi, 2000). Camp (1989) suggests that a Japanese word, "Dantotsu", meaning striving to be the best of the best, represents the essence of benchmarking.

Benchmarking practices were also demonstrated in the more recent era. In the 1800s, British textiles were the best in the world. An American industrialist, Francis Lowell traveled to England to change the situation of American mills. He applied the more advanced manufacturing technology that he learned from Britain to his textile mills. By 1840, the textile mill center in Massachusetts, known as Lowell, became the largest manufacturing center in America (Bogan & English, 1994**)**. Another example was the invention of the assembly lines in automobile factories in the early 20th century. In 1912, Henry Ford designed the world's first assembly lines by adapting the meat-cutting process during a tour of a Chicago slaughterhouse (Bogan & English, 1994).

Modern concepts of benchmarking did not gain prominence until Xerox started using a process of learning from its Japanese partner in the late 1970s and the early 1980s (Camp, 1989; Spendolini, 1992; Zairi, 1998; Zairi & Ahmed, 1999). In 1979, Xerox started a benchmarking process in Xerox Manufacturing Operations Unit to examine its unit manufacturing costs by tearing down the mechanical components of the copiers produced by its competitors. This early stage of benchmarking is called "product quality and feature comparisons" (Camp, 1989, p.6). With the analysis of copiers by Xerox's Japanese affiliate, Fuji-Xerox, and other Japanese manufactured machines, Xerox formalized the more comprehensive and sophisticated benchmarking techniques. Xerox not only evaluated the physical composition of mechanical components, but also the manufacturing costs and how the competitors achieved much lower costs. Then, Xerox's manufacturing quickly adopted these externally set benchmarks into its business plans. At first, only a few of the operating units used benchmarking. By 1981, Xerox adopted benchmarking as a corporate-wide effort.

Watson (1993) suggests that the evolvement of benchmarking can be described as five generations, from the relatively simple to the more sophisticated. The first generation of benchmarking is called as "product-oriented reverse engineering" or "competitive product analysis". Reverse engineering focuses on the specific components and functions of the products by tearing down the products for analysis. It is often the starting point of benchmarking for many companies or organizations. Companies including Xerox utilized such processes at the beginning of benchmarking (Tucker, Zivan & Camp, 1987). However, benchmarking is a more comprehensive process than reverse engineering, which leads to the second generation of benchmarking, competitive benchmarking. Competitive benchmarking goes beyond the product-oriented comparisons to process comparisons. The benchmarking

development in Xerox from 1976 to 1986 reflected the development of the second generation of benchmarking (Watson, 1993). Competitive benchmarking not only examines the outcomes, but also focuses on the process of how the competitors achieve the desired outcomes.

Watson (1993) refers the 1982-1988 as the period of the third generation of benchmarking. Benchmarking applications expand from direct competitors to non-competitors regardless of industry. This type of benchmarking is called "functional benchmarking" or "generic benchmarking". Functional benchmarking or genetic benchmarking expands the choice of benchmarking partners from within one's industry to outside one's industry. Nonetheless, Watson (1993) suggests that this shift requires more in-depth knowledge of the similarities among businesses that may seem very different on the surface to understand how to apply similar functions or processes across industries.

The fourth generation of benchmarking is strategic benchmarking (Watson, 1993). Strategic benchmarking is "…a systematic process for evaluating alternatives, implementing strategies, and improving performance by understanding and adapting successful strategies from external partners who participate in an ongoing business alliance" (Watson, 1993, p.8). The fifth generation of benchmarking is called "global benchmarking". Benchmarking application is not only across industry, but also across geographical locations.

Types of Benchmarking

Benchmarking can be characterized as internal or external, based on whether the participants of a benchmarking study are from within one's own organization or outside. External benchmarking includes competitive benchmarking and non-competitive benchmarking. Non-competitive benchmarking can be either

functional or generic (Camp, 1989; Camp, 1995), although some authors treat functional and generic benchmarking as the same (Karlöf, & Östblom, 1993; Spendolini, 1992).

Internal benchmarking compares similar operations to one another within one's own organization. It assumes that some of the work processes or functions in one part of organization are more effective or efficient than that of in other parts of the organization. "The objective of internal benchmarking activity is to identify the internal performance standards of an organization" (Spendolini, 1992, p.16). Internal benchmarking may help bridge the gaps that divide organizations by encouraging internal communications and joint problem solving within an organization. Data and information can be as complete and comprehensive as desired since confidentiality is not an issue in internal benchmarking. Internal benchmarking can serve as a basis for external benchmarking because it may not only help organizations to focus on the critical issues, but also help organizations define the scope of the external benchmarking study. However, internal benchmarking should not be regarded as a substitute for external benchmarking because the information collected from internal benchmarking may be limited (Camp, 1989).

Competitive benchmarking compares the best of the direct competitors to identify specific information about the products and services, processes, and business results of the competitors. It is useful in positioning an organization's products, services, and processes. The identification of similarities helps organizations to learn lessons about themselves without a lot of transition. In competitive benchmarking, it must be ensured that the operations or services are truly comparable. "Good benchmarking partners, moreover, are not only excellent in their own fields, but should also be comparable with your own organization to the highest degree possible"

(Karlöf, & Östblom, 1993, p.81). One of the difficulties of conducting competitive benchmarking is the sharing of information because of the sensitivity of proprietary information (Camp, 1989; Spendolini, 1992). Non-controversial issues such as facility management, human resource practices, and industrial policy issues are often benchmarked. The participation of several businesses is better than one-on-one exchanges with competitors (Spendolini, 1992).

Functional benchmarking compares companies with similar processes and services in the same function, but outside one's industry (Camp, 1989; Camp 1995). It is a comparison of products, services, and work processes with those organizations regardless of the nature of the businesses. The purpose of functional benchmarking is to discover the best practices regardless the nature of the industry (Karlöf & Östblom, 1993). Functional benchmarking face less difficulties in obtaining information from benchmarking partners since the benchmarking partners are not direct competitors. The challenge of functional benchmarking is to find operationally feasible functions from dissimilar industries that can be applied to one's own operations.

Generic benchmarking represents the broadest application of benchmarking. It compares the work processes and services to others who have "innovative and exemplar work processes" (Camp, 1995, p.16). The benefit of generic benchmarking is that an organization may find practices or methods that are not implemented in one's own industry. The application and adaptation of bill sorting process into the logistics of warehouse is an example of generic benchmarking. Although the functions are seemingly dissimilar on the surface, the mechanisms behind the functions are similar. "Genetic benchmarking requires a comprehensive conceptualization and understanding of the generic process. It is the most difficult benchmarking technique to use" (Camp, 1989, p.65).

Based on functions, benchmarking can be divided into process benchmarking, performance benchmarking and strategic benchmarking (Bogan & English, 1994; Zairi, 1998). Process benchmarking focuses on discrete work processes and seeks to identify the most effective practices from organizations that perform similar work functions. Process benchmarking uses the discovery of how the improvement is obtained to identify ways to improve an organization (Youseff, 1994). The improvement of core processes can in turn result in performance improvements. Process benchmarking usually requires site visits (Zairi, 1998).

Performance benchmarking is an important process for establishing benchmarks and identifying what "stretch objective" should be put in place (Zairi, 1998) "Stretch objectives are those that an organization strives to achieve through benchmarking" (p.72). Performance benchmarking enables managers to assess their positions through comparisons with other services or products. This approach may not require a site visit.

Strategic benchmarking is the most complicated benchmarking method. Strategic benchmarking examines how companies compete. Strategic benchmarking seeks to identify the winning strategies that have enabled high-performing companies and organizations to be successful in their marketplaces (Bogan & English, 1994). Strategic benchmarking "focuses on long-term and broad company's perspective to detect trends" (Camp, 1995, p.17). It has the ability to shift the entire focus of an organization to restructuring an organization and realign the goals of an organization, which can fundamentally change an organization (Watson, 1993; Youseff, 1994).

Benchmarking Process Models

A benchmarking process model outlines the steps that are followed in a benchmarking study. It provides the basic framework for the successful planning and

execution of a benchmarking investigation; it is a map of action (Spendolini, 1992).

Xerox's ten-step model, Motorola's five-step model, Aluminum Company of America's (ALCOA) six-step model, Florida Power & Light's seven-step model, AT&T's twelve-step model are the most commonly referred models in literature (Boxwell, 1994; Spendolini, 1992; APQC, 1993). No matter how many steps these models use, there are four common fundamental components in benchmarking models. These four steps are often referred to as the "Deming Cycle". The "Deming Cycle" is named after W. Edward Deming, a quality management expert, who is "…recognized around the world as the one who gave the modern quality movement the principles by which to think and act" (Delavigne & Robertson, 1994, p. xxi).

Deming's Cycle includes four major components: Plan, Do, Check, and Act (Watson, 1993). In his own writing, Deming refers the cycle as the "Shewhart Cycle" because it originated from Walter Shewhart's PDSA Cycle. Shewhart's PDSA Cycle includes four components: Plan, Do, Study, Act (Delavigne & Robertson, 1994; Walton, 1990). The American Quality and Productivity Center uses this cycle as the basis for benchmarking model and modifies it as Plan, Collect, Analyze, Improve (APQC, 1993; Camp 1995). The cycle means that benchmarking is a continuous process (Figure 1).

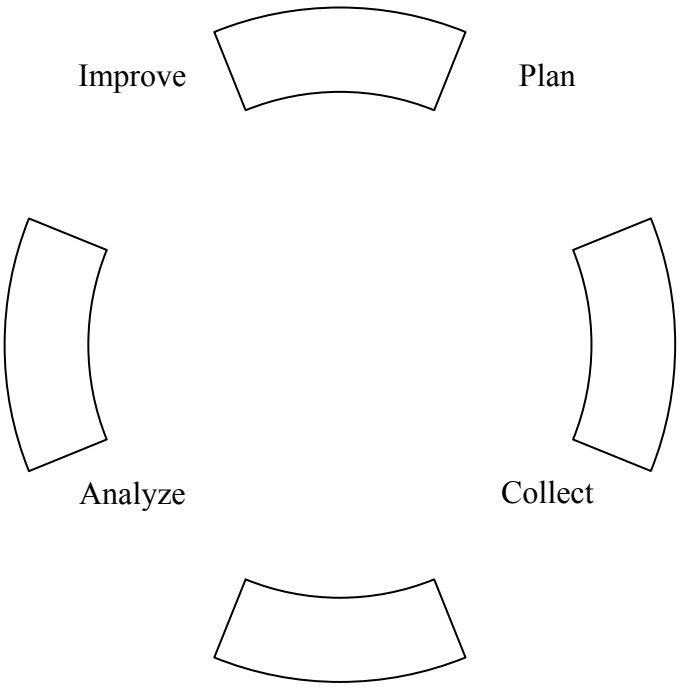


Figure 1

Foundational Steps of Benchmarking

Based on this cycle, different benchmarking process models were developed mainly based on practical experiences. The major benchmarking process models include the following:

The four-step model includes the following steps (APQC, 1993, p. 141-142; Camp, 1995, p.9):

1. Plan: Step one - plan a benchmarking project
2. Collect: Step two - collect data
3. Analyze: Step three - analyze data for performance gaps and enablers
4. Improve: Step four - improve by adapting process enablers and best practices

The five-step model includes the following steps: (Spendolini, 1992, p.48;

Karlöf &Östblom, 1993):

1. Plan: Step one - determine what to benchmark

   Step two - form a benchmarking team

   Step three - identify benchmarking partners

2. & 3. Collect & Analyze: Step four - collect and analyze data

4. Improve: Step five - take action

The American Productivity and Quality Center's (APQC) six-step model includes the following steps (APQC, 1993, p.140):

1. Plan: Step one - plan
2. Collect: Step two - research

   Step three - observe

3. Analyze: Step four - analyze
4. Improve: Step five - adapt

   Step six - improve

The ALCOA (The Aluminum Company of America) six-step model includes the following steps (Bemowski, 1991, p.23-24):

1. Plan: Step one - decide what to benchmark

   Step two - plan the benchmarking project

2. Collect: Step three - understand your own performance

   Step four - study others

3. Analyze: Step five - learning from the data
4. Improve: Step six - using the findings

The seven- step model includes the following steps (APQC, 1994, p.140; Camp, 1995, p.9):

1. Plan: Step one - determine functions or processes to benchmark

Step two - identify key performance variables

Step three - identify best-in-class companies

2. Collect: Step four - measure performance
3. Analyze: Step five - compare performance and estimate gaps
4. Improve: Step six - specify improvement

Step seven - implement and monitor results

The eight-step model includes the following steps (APQC, 1994, p.140; Camp, 1995, p.9):

1. Plan: Step one - define business issue

   Step two - define what to benchmark

   Step three - define benchmark measure

   Step four - determine what to benchmark
2. Collect: Step five - acquire data
3. Analyze: Step six - compare performance

   Step seven - identify actions to close the gap
4. Improve: Step eight - implement improvements and monitor results

The Xerox's ten-step model includes the following steps (Camp, 1989, p.9):

1. Plan: Step one - identify what is to be benchmarked

   Step two - identify the comparative partners
2. Collect: Step three - determine data collection method and collect data
3. Analyze: Step four - determine current performance gap

   Step five - project future performance levels
4. Improve: Step six - communicate benchmarking findings and gain acceptance

   Step seven - establish functional goals

Step eight - develop action plans

Step nine - implement specific actions and monitor progress

Step ten - recalibrate benchmarks

The AT & T's twelve-step model includes the following steps (Bemowski, 1991, p. 22-23):

1. Plan: Step one - determine who the clients are

Step two - advance the clients from the literacy stage to champion stage

Step three - test environment

Step four - determine urgency

Step five - determine the scope and the type of benchmarking needed.

Step six - select and prepare the team

Step seven - overlay the benchmarking process onto the business planning

Step eight - develop the benchmarking plan

2 & 3: Collect & Analyze: Step nine - analyze the data to make sure that sound quality principles are followed

4. Improve: Step ten - integrate the recommended actions

Step eleven - take action

Step twelve - continue improvement

Although these models are consisted of different number of steps, the essential components are similar. One reason for such similarities was that those who created the models were strongly influenced by the published successful examples and these

models worked in practice. Organizations such as Xerox that received the Malcolm Baldrige National Quality Award became the models for others to benchmark (Watson, 1993).

The Malcolm Baldrige National Quality Award was established in 1987 by the U.S. Congress to raise awareness about quality and its importance for American business organizations (Zairi & Youseff, 1995). As the award develops, the recognition of exceptional performances now has expanded from business to education, health care, and not-for-profit organizations. Although governmental agencies are not eligible to receive the Malcolm Baldrige Award, the criteria are useful in helping governmental agencies to direct their improvement efforts. The Malcolm Baldrige National Quality Award consists of seven criterion categories: leadership; strategic planning; customer and market focus; measurement, analysis, and knowledge management; human resource focus; process management; and business results (National Institute of Standards and Technology, 2004).

In fact, similar awards have been established to award the quality management of governmental agencies. The Federal Quality Institute has created the Quality Improvement Prototype Award (QIP) to recognize federal governmental agency that shows exemplary quality and service improvements. The Federal Quality Institute also sponsors another award, the President's Award, every year to a governmental agency or a major division within that organization that has applied Total Quality Management (TQM) exceptionally (Dean & Helms, 1996). The QIP and the President's Award use the following criteria: leadership and executive support; customer orientation; strategic planning; work training employee participant and teamwork; evaluation measures and analysis; quality improvements; and productivity results (Federal Quality Institute, 1990).

Since most of organizations and companies followed essentially the same steps in benchmarking and proved to be successful, organizations should not spend a lot of time creating new benchmarking process models when they could put their efforts in the benchmarking project itself (Watson, 1993, Spendolini, 1992). “The number of steps is not as important as the use of an integrated, systematic, measured approach to benchmarking” (APQC, 1993, p.32). Following a logical sequence of activity is more important than spending time in developed models with more steps. The twelve-step model is not necessarily better than the six-step model. The best measure of a process model is “whether it is easy to understand, to follow, and to translate into action” (Spendolini, 1992, p.43).

The Principles of Benchmarking

According to Watson (1993), there are four principles of benchmarking: reciprocity, analogy, measurement, and validity. Successful benchmarking is based on reciprocal relationships among benchmarking partners, which should make all the participants winners as the result of benchmarking through sharing and exchanging of information. To ensure reciprocity, each benchmarking participant must be assured of each other’s intention and the benchmarking results must deliver what has been agreed upon among benchmarking partners.

To achieve a higher degree of knowledge transfer, the operational process must be comparative or analogous in the benchmarking study. Benchmarking is a process of measured performance comparison. Furthermore, the objective of benchmarking is to understand why and how the benchmarking partners have a higher degree of performance. Therefore, careful measurement and observation are essential in benchmarking process. Lastly, valid facts and data must be collected and analyzed for comparisons. These four principles are the methodological basis for conducting a

benchmarking study.

Camp (1989, 1995) suggests four philosophical steps fundamental to the success of benchmarking, which includes knowing your own organization; knowing industry leaders or competitors; incorporating the best; and gaining superiority. Organizations need to assess their own strengths and weaknesses before analyzing their competitors. Understanding the industry leaders or competitors is the essential component of benchmarking process. Benchmarking does not stop at analyzing the competitors, and the more important step is the incorporation of the best practices in one's own organization. The ultimate goal of benchmarking is to capitalize on what has been learned and gain superiority. "Benchmarking is the formalized and more disciplined application of these very basic steps to operational improvement and the achievement of superiority" (Camp, 1989, p.2).

Benefits of Benchmarking

Benchmarking is a fundamental business skill that supports quality excellence (Bogan & English, 1994). "The objective of benchmarking is to provide a goal for realistic process improvement and an understanding of changes necessary to facilitate that improvement" (APQC, 1993, p.136). The benefits of using benchmarking are that companies and organizations investigate external industry best practices and incorporate those practices into their operations (Camp, 1989). "Learning by borrowing from the best and adapting their approaches to fit your own needs is the essence of benchmarking" (Bogan & English, 1994, p. 3).

Benchmarking may benefit an organization in several ways. Benchmarking helps in strategic planning and goal setting (Bogan & English, 1994; Spendolini, 1992). Benchmarking is one of the major organizational assessment strategies (Montgomery, 1995). By reviewing the practices, strategies, structures, and services

of industry's front-runners, benchmarking helps an organization to make changes and validate their goals, plans, and strategies. "Benchmarking is an integral part of the planning and ongoing review process to ensure a focus on the external environment and to strengthen the use of factual information in developing plans" (Camp, 1995, p.15).

Benchmarking provides sources for continuous improvement. Benchmarking enables best practices to be creatively incorporated into the processes of the benchmarked function. Benchmarking is not just a practice associated with model organizations, but applicable to any organization that is committed to continuous improvement (Zairi, 1994). Different organizations may have varying learning curves, resources, and pace of achievements, but benchmarking can lead to incremental improvements to existing performance levels, new ways of practices, and a road to excellence. The real benefit of benchmarking is from the understanding of practices that allow the superior performances to be transferred to an organization.

Lastly, benchmarking helps organizations identify breakthroughs that may not be identified otherwise. Benchmarking may expose people to new ideas, approaches, and procedures that are more effective and efficient than what the organization has already known. Benchmarking provides opportunities to think "out-of-the box". Benchmarking is a learning experience and discovery process for an organization to stimulate the transfer of new ideas into the operation process of an organization.

Jarrar & Zairi (2001) conducted a global survey, which included 227 organizations of 32 countries, to assess the trends and future directions of benchmarking. The findings revealed that benchmarking was widely utilized worldwide and across various industries, from manufacturing to government to educational institutions. The findings also showed that benchmarking was capable of

high benefits including the following aspects: (1) quality improvement; (2) increase of speed of service; (3) innovative process improvement; (4) process improvement; (5) understanding of customer requirements; (6) setting internal standards; (7)influencing strategic decision-making process; (8) more effective and efficient management of resources; (9) more effective deployment of resources; and (10) improvement in people management, and change in approach of style of leadership within the organization (p.910).

Limitations of Benchmarking

There are many benefits of conducting benchmarking for an organization, yet benchmarking has several limitations. Techniques such as benchmarking mainly enhance current production and service processes of an organization. Benchmarking only has long-term benefits if it is a continuous process since "best practices" develop and change constantly. Furthermore, systematic benchmarking requires lots of resource investment and takes a long time. Benchmarking requires an organization's commitment if it is to be successful. In addition, benchmarking requires that organizations have a high capacity and readiness for change and can undertake sustained implementation programs to achieve the best results. Otherwise, benchmarking may not be useful and effective for an organization.

Benchmarking in the Public Sector

Today, productivity and quality management is not just a matter for private businesses, but also for public agencies and government. Citizens and constituents are asking governments and public agencies to do more with less. In the private business world, business managers are always looking for better ways to do business by using benchmarking as a management improvement tool. Public agency managers should start to treat their constituents as customers entitled to high quality service, efficient

performance, and satisfaction for their tax dollars because citizens will stop patronizing a particular agency or service with deficient performance level (Keehley et al, 1997). Although benchmarking originates from private businesses, it is becoming a popular management tool among public administrators (Coe, 1999). "Government agencies have collected data and made comparisons for years but seldom take the next step: identifying the top performers and importing best practice. Benchmarking is the most sensible route for public sector agencies seeking to improving performance" (Keehley et al, 1997, p.38).

Public agencies and government agencies are under pressure to improve their service quality and effectiveness, especially when faced with budgetary pressures and uncertain economic conditions. Under the pressure of fiscal retrenchment, public agencies must keep up with the changes. Benchmarking is a tool that allows public agencies to cope with changes, and continue to meet citizen expectations (Keehley et al., 1997). Benchmarking within the public sector is, in many ways, the answer to the question of how to achieve such improvement (Bruder & Gray, 1994).Searching for the best practices is a new way to think about the role of government, which is a catalyst in helping communities flourish in a rapidly changing society. Administrators of public and governmental agencies must become better managers of limited financial resources by reallocating funds to higher priorities, controlling the problems before the problems progress, and providing a more thorough accounting of expenditure return (Keehley & MacBride, 1997). Agencies in the public sector can use benchmarking to provide better services to constituents.

Benchmarking can help public agencies to identify variability in performance and reduce it by optimizing imported processes by learning from other superiors. Besides the general rationale for benchmarking mentioned earlier, there are several

other reasons for the public sector to do benchmarking.

Benchmarking helps public organizations to determine criteria that measure performance. The criteria provide the basis and foundation for making comparisons and making improvements for an organization. Benchmarking also helps public organizations recognize the problematic areas of particular services and improve service delivery. “Finding and importing best practices will encourage public agencies to replace reactionary measures with preventive ones” (Keehley & MacBride, 1997, p. 79). Best practices may also help public agencies to form bonds with private businesses if they choose private businesses as benchmarking partners.

Former Vice President Al Gore’s National Performance Review brought benchmarking in governmental agencies to the forefront in the in the early 1990s (National Performance Review, 1997). The report encouraged federal, state, and local governments to select best practices to improve the performance of the governmental agencies. Pioneer public and governmental organizations showed that benchmarking can and will work for a wide range of government functions to help them to seek opportunities, think entrepreneurially, and overcome public perceptions of inefficient performance by public agencies (National Performance Review, 1997). For example, the state of Oregon has been a leader in benchmarking in state government. Oregon started their benchmarking through a program called “Oregon Shines” as a part of strategic planning for the economic development in 1989. Oregon Benchmarks used 90 quality of life indicators to measure progress towards the strategic vision identified in “Oregon Shines” (Oregon Progress Board, n.d.). Another example is the state of Minnesota. Minnesota was one of the first states to implement a comprehensive statewide benchmarking project, Minnesota Milestones. “Through Minnesota Milestones, the use of benchmarking and performance measurements has proved to be

useful both as a public policy tool and as a way to hold government accountable for results" (Performance management, benchmarking and reengineering within government, 1996, p.58).

Ammons (1999) suggests that there are three ways that public agencies can do benchmarking studies. One is the direct adoption of a corporate version of benchmarking, which usually focuses on one single process rather than several departments or the entire agency. The second form of benchmarking emphasizes the articulation of a certain vision and establishments of targets to realize the vision, which is similar to strategic planning. The third form of benchmarking features the comparison of performance measures to appropriate external standards, which can be professional standards, state or national statistics, or the performance targets of the chosen counterparts.

Challenges of Benchmarking in Public Sector

Successful benchmarking in the public sector requires a great deal more than mastering the technical process (Keehley et al. 1997). The unique realities of public sector operations should not be overlooked. Government and business are fundamentally different in their purposes, goals, and resources (Osborne & Gaebler, 1992); therefore, benchmarking must be utilized with sensitivity to government's unique circumstances. There are a few concerns in public sectors when doing benchmarking.

First, political factors should be taken into consideration when conducting benchmarking in the public sector (Keehley et al, 1997; Swiss, 1992). The perceptions of politicians may create some obstacles to benchmarking and the implementation of it. It is important to gain support from political constituencies.

Second, governmental culture may be another challenge for public agencies.

High turnover rate in top-level management and the lack of incentive for top political officials pose some difficulties in the implementation of quality systems, such as TQM and benchmarking (Swiss, 1992). “An over-commitment to regulation and enforcement of precedent and rules may pose a higher resistance to change” (Morgan & Murgatroyd, 1994, p.47).

Third, a major challenge for any organization undergoing benchmarking is the identification of potential barriers. Background research and briefings from agency officials should reveal regulatory requirements that may come into conflict with imported practices. The existence of legislative bodies also has an impact on the implementation of benchmarking. Some functions of public agencies are functions of unique legislation that may make comparison with others difficult (Morgan & Murgatroyd, 1994). “Regulations do not have to prevent the use of best practice, but they do add another degree of difficulty” (Keehley et al, 1997, p. 15).

Fourth, government’s multiple stakeholders make it difficult to reach consensus on the critical measurements in benchmarking, such as mission, goals, and performance measures (Performance management, benchmarking and reengineering within government, 1996). Additionally, measuring outcomes can be difficult in some cases. The multiple stakeholders of governmental agencies have divergent and even contradictory demands rather than an easily defined target customer group like private businesses.

Public agencies may face unique problems or pressing issues that are influenced by local, public, and political environment. Benchmarking should take advantage of such unique opportunities to “mobilize a meaningful and highly invested segment of the populace and interested stakeholders in a collaborative search for best practices” (Keehley et al., 1997, p. 87).

Benchmarking Process

Exploratory Benchmarking

Karlöf & Östblom (1993) suggests that "…benchmarking can be used for exploratory or diagnostic purposes to locate the areas where improvements are possible" (p.99). Many large organizations and public organizations often have numerous functions and often these organizations do not know how their performance compares with others in efficiency. In such situations, benchmarking can start from the whole organization to find out the parts or the places of an organization that need to be improved. The purpose of exploratory benchmarking is to assess the situation by analyzing the organization and its component parts as a whole and it may earmark some suitable areas for future in-depth benchmarking.

Determine What to Benchmark

Identifying what is to be benchmarked can be one of the most difficult steps in the benchmarking process (Camp, 1989). Identifying critical success factors (CSFs) is important (Spendolini 1992). Critical success factors are those characteristics, conditions, or variables that have the greatest and most direct influence on an organization's success. A similar term like CSFs is "key business processes/practices", which convey the same meaning as CSFs (APQC, 1993; Watson, 1993). To determine critical success factors, an organization must identify those process performance measures that indicate the quantitative level of performance for a key business process. Business processes are combinations of people, equipment, material that are organized to produce output. For an organization new to benchmarking, it should start out to select an area that is relevant to the objectives of the organization, but is not the most complex or sensitive issue facing the organization (Spendolini, 1992). Keehley et al (1997) suggest the processes that have strategic importance to the effectiveness

of an organization are important to consider when selecting practices to benchmark. Lingle and Schiemann (1996) suggest that such strategic performance practices including: (1) financial performance; (2) operating efficiency; (3) customer satisfaction; (4) employee performance; (5) innovation/change; and (6) community/environment should be considered as important benchmarking measures.

Performance Measurement in Benchmarking

Performance measurement is one of the essential elements of quality management that are important to benchmarking (Keehley, et al, 1997). "Measuring, so important to quality management, relies on benchmarking as a tool" (Keehley et al, 1997, p.35). Performance measurement is essential to organizations who want to achieve superior levels of effectiveness and efficiency. "All high-performance organizations whether public or private are, and must be, interested in developing and deploying effective performance measurement and performance management systems, since it is only through such systems that they can remain high-performance organizations" (National Performance Review, 1997). Benchmarking is the tool for setting organizational goals and transforming them into tangibles (Zairi, 1994).

Performance measures in the public sector are "the process of quantifying the operation process, program, or any other activities through which a public agency delivers products or services to its customers" (Keehley et al, 1997, p.31). Performance measures are also called as "quantitative benchmarks" (Camp, 1995). Performance measures are the conversion of benchmark practices to operational measures. A single performance measure is obviously not adequate because it cannot reflect the operation of an organization completely. Therefore, Keehley et al (1997) suggests that a group of measures should be developed to reflect the overall picture of

the operation of an agency. These performance measures can help to understand how well an agency performs and to identify what need to be benchmarked to improve. Performance measures help legislators and public executives to make informed decisions based on achievement of outcomes instead of political considerations.

Performance measurement is the keystone for an organization to seek reform for improvement. Benchmarking is one facet of performance measurement and it requires a fundamental performance measurement system. As Laura Longmire, the National Director of Benchmarking, KPMG Peat Marwick, LLP said, "Performance measurement is like a compass, showing where the organization is now, and benchmarking is like a map to help the organization to find where and how to improve" (Performance management, benchmarking and reengineering within government, 1996, pp.78-83). "The primary benefits of performance measurement is that the analysis, clarification and rethinking that occurs when agencies try to express expected results and actual results in concrete terms", stated Sheron Morgan, from the North Carolina Office of State Planning Carolina Office of State Planning. Morgan's statements were based on a North Carolina project, North Carolina Performance/Program Planning and Budgeting (P/PPB) project, which used performance measures in state government's programmatic planning and budgeting (Performance management, benchmarking and reengineering within government, 1996, p. 60-66).

Principles and Criteria for Performance Measures

Developing effective performance measurement is critical. There are several principles for selecting effective performance measurement as suggested by former assistant comptroller of General Accounting Office (GAO), Johnny Finch (Performance management, benchmarking and reengineering within government,

1996). First, successful performance measurement requires agencies to have a clear understanding of their mission, customers, and desired results. Agencies need to maintain a focus on defining mission, achieving mission specific results, and satisfying customers' need. Second, involving multiple stakeholders is important because it helps ensure the performance measurements are developed properly and useful to a wide range of stakeholders. Lastly, the number of measurements should be limited to the vital ones that can provide most needed information for accountability, policymaking, and program management. Using a few significant performance measurements can provide a better basis for assessing outcomes, facilitating decision-making, and focusing on accountability.

The performance measurements in Minnesota Milestones are based on the following principles: (1) clarity (easy to understand); (2) validity (measure what it is intended to measure); (3) availability of data (data easily obtainable on a regular basis), and (4) accuracy and focus on outcomes (Performance management, benchmarking and reengineering within government, 1996). The North Carolina's Performance/Program Planning and Budgeting (P/PPB) program suggests that good performance measurement should have three characteristics: linking policy to budget with focus on outcomes; shifting accountability from efforts to results; and guiding workers by linking individual behavior to program outcomes (Performance management, benchmarking and reengineering within government, 1996).

There are a few criteria on how to select the key performance variables to benchmark in public sector (Bruder and Gray, 1994). The operational efficiency variables are crucial variables, which include both cost variables and differentiation variables. They are important variables to benchmark. Cost variables include labor efficiency, compensation, benefits, and overhead cost, etc. For example, the function

that makes up a high percentage of cost is one important aspect to benchmark. Through benchmarking, the improvement may have a potentially enormous impact on the cost-effectiveness of an organization. If a function is not cost-critical, but it is a key differentiation service that might be winning the clients of a service, such a function could be a high-priority benchmarking function. Such variables are called "differentiation variables". Differentiation variables may also include service breadth, quality, image, and the qualitative opinions of customers. A function that appears to show room for improvement should be another criterion. If the improvement of a function is constrained by politics, regulation, organization, or resources, it may not be a good candidate for benchmarking.

Customer issue is essential to guide the benchmarking process, which is emphasized in the private businesses. This applies to public agencies, too. The focus on improvement of processes to meet and exceed the expectations of customers or clients is essential in guiding the benchmarking process. "The criterion assesses the extent to which the local government sees itself as service provider that gears its services to the needs of its citizens" (Keehley et al. 1997, p. 85). Processes or functions that have great potentials for benchmarking may also include the following characteristics (Keehley et al, 1997): (1) having high impact on clients; (2) being highly visible to both insiders and outsiders of the agency; (3) resource intensive; (4) having a history of problem; (5) flexible to be changed to improve; (6) having an environment conducive to change; (7) being well understood; (8) supporting mission, vision, and strategic direction of the organization; and (9) having a need for outside resources for improvement.

Competition with the private sector is another important issue, and it can help to decide what to benchmark. Keehley et al (1997) suggest that if certain functions of an

organization are candidates for privatization, they are also potentials for benchmarking because the reasons for privatization are also the reasons for importing best practice. “In privatizing, you import agency (or at least some part of its functions) to the best practice, whereas in benchmarking you import the best practice to the agency” (Keehley et al. 1997, p.86).

No matter whether organizations are public or private, they tend to be interested in the same general aspect of organizations, such as financial considerations, customer satisfaction, internal business operations, employee satisfaction, and community and shareholder/stakeholder satisfaction (National Performance Review, 1997). However, for public agencies, there are no universally accepted performance measures. “For public sector organizations, performance must be judged against the goals of their programs and whether the desired results and outcomes have been achieved” (National Performance Review, 1997).

There are a few critical steps in selecting functions for benchmarking. Keehley et al (1997) suggest that an agency should list the most important functions/processes and describe them in detail so that administrators, key officials, employees and other stakeholders can participate in determination of choosing the most appropriate processes. The agency should develop and validate a set of criteria to determine which functions/processes to benchmark. These criteria may help organization choose the most relevant and important functions with the input of interested parties and constituencies. Then, the agency should assess each function/process against each criterion to prioritize the practices and choose the top choices on the list for the benchmarking.

Identify Benchmarking Partners

Identifying benchmarking partners needs carefully planned research. However,

there is no prescriptive way to determine against whom to benchmark (Camp, 1995). One method of identifying benchmarking partners that includes three major steps: developing a candidate list through some preliminary research; reducing the list to a target number of candidates focused on the function; and preparing for a contact (Camp, 1995).

There are sources that can provide the possible benchmarking partners. Such sources include: (1) list of organizations that are best in class as judged by a periodical's research; (2) organizations receiving recognition or awards for some outstanding effort; (3) citations from others; organizations that have some indicator of innovativeness; and (4) organizations that receive direct positive feedback from customers (Camp, 1995).

There are seven criteria to define best practice: (1) being successful over time; (2) having quantifiable results; (3) innovative; (4) having recognized positive outcome; (5) repeatable; (6) having local importance and (7) not linked to unique demographics (Keehley et al, 1997). Best-practices have different levels, from superior to current practices, best practices, to best-in-class/world-class. "The best" is a relative term. O'Dell and Grayson (1998) implied that labeling practices as "best" often raises many dissenting voices in organizations not only because the criteria of "best" are constantly changing, but also "best" is also situation specific. They prefer the terms "better" or "exemplary" or "successfully demonstrated" to "best". "So our definition of best practices is 'those practices that have produced outstanding results in another situation that could be adapted for our situation'" (O'Dell & Grayson, 1998, p.13). Spendolini (1992) concurred with such opinions. He suggests that different levels exists in the process of searching for the best practices.

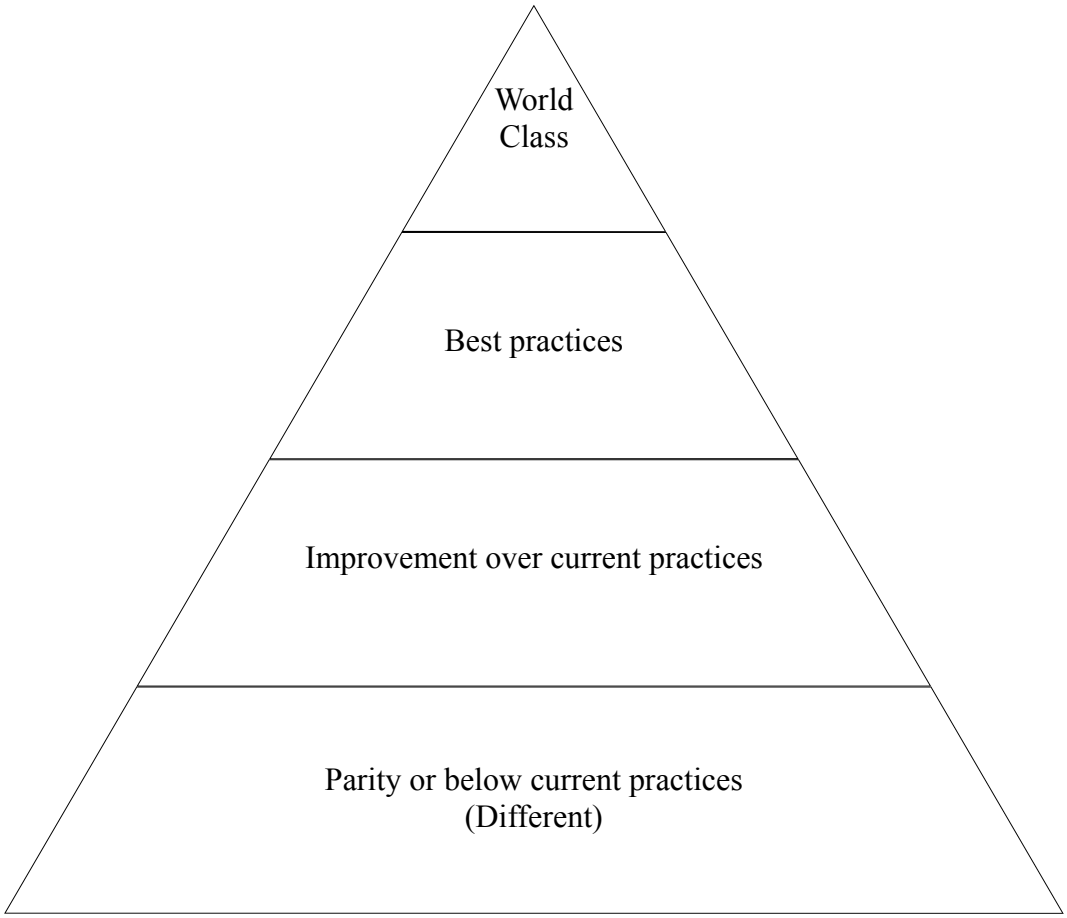


Figure 2

The Search for Best Practice (Spendolini, 1992, p.113)

Organizations that conduct benchmarking should set realistic objectives from "an improvement over current practices" to "true world leadership" (Spendolini, 1992, p.112), depending on how organizations define their benchmarking and improvement objectives on different levels. The pyramid-shaped diagram (Figure 2) also implies the amount of information that is available for each level. "As an organization

attempts to identify and analyze business practices at the top of the pyramid, the amount of resources required (e.g., time, funds, people) to pinpoint specific organizations and their activities also increases" (Spendolini, 1992, p.112).

Setting a realistic definition of one's true objectives backed by a realistic commitment of resources is important in making benchmarking beneficial to an organization (Spendolini, 1992). Choosing an appropriate level in the search of best practice is of greater value than setting a lofty goal but not being able to achieve it. Karlöf and Östblom (1993) agreed. "…good examples should be found with aim of creating sufficient improvement for the organization not to overreach itself, but to initiate change in terms of real improvement" (p.121). However, this does not imply reduction of ambition or the spirit of striving for the best. "…it leads instead more rapidly and efficiently to the goal of continuous improvement" (p.122).

Keehley et al (1997) suggest the criteria for benchmarking partner selection, which include work processes, mission, professional field, number of functions to be benchmarked, type of government, demographics, geographic location, size of partner organization, and technology in addition to the "best practice" criterion. An agency that is new to benchmarking will want to select partners that are similar to the agency being evaluated.

Watson (1993) suggests that a more careful approach should be used to seek benchmarking partners. Seeking analogous performance success is more important than just seeking the best of the best. Four major categories of organizations can be considered when seeking benchmarking partners, which include direct comparables, parallel comparables, latent comparables and out-of-category organizations (Bruder & Gray, 1993).

Direct comparables refer to those target benchmarking partners that perform the

same or almost the same services. For example, organizations of similar size and mission statement obviously offer higher chances in discovering applicable practices that can be transferred than organizations of dissimilar size and mission statement in benchmarking.

Parallel comparables refer to those organizations whose services overlap only partially with the organization that conducts the benchmarking study. The comparables may also offer a wide range of practices that an organization may strive to emulate. When parallel comparables are used, different operating environments must be understood and considered in the analysis.

Latent comparables are organizations that do not provide the same service, but they may do so at some point in the future. When a latent comparable organization starts offering the same service, it often can redefine the level of performance by offering higher quality of performance. Benchmarking against such organizations may be very important.

Choosing an out-of-category organization as a benchmarking partner is also a valuable form of benchmarking. It will give an organization an opportunity to bring in new techniques outside the typical realm of services, which may enable an organization to surpass the most capable organizations.

Finding analogous partners is important for a successful benchmarking study. The criteria used to form the analogy may include factors such as organization size and type, mission, decision-making culture, use of teams, reputation or recognition for business excellence, and degree of admiration by the management team of the benchmarking team (Youseff, 1994). An agency should match itself closely with benchmarking partners in terms of compatibility to ensure that it has mechanism that allows a successful importation of superior practices. Zairi (1992) suggests that in

many instances, when the benchmarking process is broken down into critical elements, the selection of benchmarking partners may have to come from a blend of partners to address diverse issues.

Establishing Contact with Benchmarking Partners

After an organization determines benchmarking partners, they must obtain agreement from the chosen benchmarking partners to participate in the benchmarking study. Karlöf & Östblom (1993) suggest several steps that can be followed to establish initial contact with benchmarking partners. First, calling or writing a short letter to make an appointment for an initial meeting with potential benchmarking partners for the benchmarking study is important. Second, a meeting with potential benchmarking partners to explain the project and supply the information that the potential partners need to decide whether to participate in the benchmarking study or not is also necessary.

When making the initial contact with potential partners, the organization that conducts the benchmarking study should emphasize the participation in benchmarking study offers many benefits to the participants. For example, participating organizations may learn about the areas of other businesses for little investment of resources through the participation of a benchmarking study. In addition, participating organizations may gain new insights about their own business operations. Furthermore, participating organizations may learn how to conduct a benchmarking study at no cost if benchmarking is new to them. This may help them to conduct similar studies themselves in the future.

When meeting with potential benchmarking partners, the organization that conducts the benchmarking study should communicate with potential partners the following areas: (1) introduction about the organization and its business; (2) the

purpose and objectives of benchmarking; (3) the benchmarking project plan; and (4) assurance of reporting back when the project is finished. The organization that conducts the benchmarking study should show the potential benchmarking partners that the organization is serious about the benchmarking study. The organization should have a systematic plan for the benchmarking study and should be willing to share information with benchmarking partners. If these principles and steps are followed, it will increase the chances of successfully obtaining cooperation from benchmarking partners.

How to Collect Data in Benchmarking

Methods

Data collection for benchmarking starts from internal information (Camp, 1995; Karlöf & Östblom, 1993). With one's own business as a frame of reference, it helps to define and specify what information is needed. Using questionnaires is a common choice for collecting the information from benchmarking partners. Telephone interviews, video conferences, and on-site interviews are also the frequently used benchmarking methods in data collection in a benchmarking study (Camp, 1989; Camp, 1995; Karlöf & Östblom, 1993).

Principles

When an organization starts making initial contact with benchmarking partners, they should summarize their interests in their partners and identify the way of selecting their benchmarking partners. An organization that shows knowledge of benchmarking and related subject areas will demonstrate to their partners that they are serious in their pursuit of improvement. In addition, they are more likely to gain cooperation from their partners. The organization that conducts the benchmarking study should explain the benefits of benchmarking to potential partners. As Keehley et

al. (1997) suggest, a public agency that conducts benchmarking may have many things in common with its potential partners, therefore, can establish bond quickly. Such similarities may include organizational culture, human resource management rules, functions and processes, citizen clients, and budget restrictions.

After benchmarking partners agree to provide requested assistances, a benchmarking study moves to the stage of data collection. There are some basic protocols should be followed. An organization that is benchmarking with partners of public agencies must be sensitive to proprietary information (Keehley, et al. 1997). Proprietary information includes the information that is created, acquired, controlled by an organization that has not been published or released without restriction and the organization wishes to maintain such information confidential. Financial status, product development, and market strategy can be regarded as proprietary information. An organization that conducts a benchmarking study needs to acknowledge and accept partners' restrictions and controls in terms of proprietary information. The partner relationship in a benchmarking study should be viewed as information exchange and sharing. If partners are learning as much from the project as the organization that conducts the benchmarking study is, they will be more willing to cooperate (Keehley et al., 1997).

The International Benchmarking Clearing House, which is a service of the American Productivity & Quality Center, suggests a Code of Conduct for benchmarking (APQC, 1993, appendix A, p. 229-231). The benchmarking Code of Conduct includes nine principles.

1. Principle of legality - The benchmarking organization should avoid activity that may have questionable legality and must not extend benchmarking study's findings to others without permission of the parties.

2. Principle of exchange - The benchmarking organization must be willing to provide the same type and level of information that are requested from benchmarking partners.

3. Principle of confidentiality - Benchmarking information must remain confidential among benchmarking partnering organizations and should not be disclosed without prior permission.

4. Principle of use - The benchmarking information should be only used for the purpose of improvement of operations or processes within the participating benchmarking partners. The use of the benchmarking partner's name with the data obtained requires prior permission too.

5. Principle of first-party contact - The benchmarking organization should initiate benchmarking contacts through a benchmarking contact designated by the partner and respect the culture and procedures of the partner organizations.

6. Principle of third-party contact - The benchmarking organization should obtain an individual permission before providing his/her name in response to a contact request and avoid a contact's name in an open forum without permission.

7. Principle of preparation - The benchmarking organization must demonstrate full preparation before contacting benchmarking partners and make the most of benchmarking partner's time efficiently and effectively.

8. Principle of completion - The benchmarking organization should follow through each commitment in a timely manner to the satisfaction of all partners as agreed.

9. Principle of understanding and action - The benchmarking organization should understand and treat benchmarking partners in the way that each benchmarking partner would like to be treated. The benchmarking organization

should handle and use the information collected in the way that agreed by the benchmarking partners.

Data Analysis in Benchmarking

Quantitative and Qualitative Comparisons

The goal of quantitative analysis in benchmarking is to locate and assess the opportunity for performance improvement (Keehley et al. 1997). By taking the higher level of performance from the best practice and comparing it with the current level of performance in its own internal process, the benchmarking organization will be able to determine the degree of improvement that is possible. This process is the process that identifies the performance gap between the benchmarking organization and its benchmarking partners. Identifying the performance gap should answer three questions: How large is it? Where is it? When does it occur?

Vaziri (1992) stated, "Raw data are transformed into information that can be used to assess the current state of your organization and to target benchmarks. The findings must be evaluated in light of internal factors specific to each company" (p.84). The first step in assessing the performance gap is to review the data as they come in and determine whether additional information is needed. When all the facts are in, the benchmarking organization selects the best performance for each factor and calculates the percentage difference between the level of best performance and one's own organization (Keehley et al. 1997). More often, the computation reveals a performance gap, but it may also show superiority (Vaziri, 1992). Camp (1989) refers to such situation as a "positive gap" (p.123).

Qualitative comparisons revolve around the more descriptive analysis related to the benchmarking partner's procedures and methods. It should answer two questions: What does the benchmarking partner do that is the same as we do? What does the

benchmarking partner do that is different? A public agency needs selection criteria to choose excellent practices that qualify as the best practices.

Steps in Data Analysis

Karlöf & Östblom (1993) suggest several steps in the analysis of benchmarking data. First, the information collected should be sorted and organized. Comparative measurements and hard figures should be sorted first with explanatory material as a background. Data matrices can be created to present the data for comparison.

Next, information collected should be checked for its accuracy. If obvious anomalies or discrepancies that seem incorrect occur, the benchmarking organization should check back with interviewees and other informants to ensure the quality of the data. It is also important to identify, analyze, and make corrections for the non-comparable factors (Karlöf & Östblom, 1993).

It is essential to make corrections on the factors, circumstances, or influences that make the comparison "unfair" while at the same time to find points of comparison that appear differently on the surface, but follow the same logic fundamentally. The inclusion of non-comparable factors in benchmarking analysis might increase the credibility and acceptability of the benchmarking study (Karlöf & Östblom, 1993).

Identifying the performance gap to benchmarking partners is one of most important steps in benchmarking data analysis. It is critical not only to identify the performance gap, but also to understand the underlying operative content or work processes that explain the gap.

How to Implement Benchmarking Findings

The results of the benchmarking study must be formulated as new goals for the business (Karlöf & Östblom, 1993). Benchmarking results needs to be integrated with

the regular business plan. The successful implementation of benchmarking results requires full participation and commitment of management, full understanding of organizational goals and strategies, a definite timetable, and a plan of action. The action plan developed from benchmarking findings needs to support the organization's missions and goals. Identifying the hindering forces will also help to implement the findings more easily (Camp, 1989).

Spendolini (1992) suggests that there are several basic kinds of activities that can take place in the implementation stage of benchmarking. Producing a report is a typical activity in benchmarking. The report is not only a record for the benchmarking organization's data and files, but also is a foundation for communications to external parities. In addition, presenting findings to benchmarking customers is an important step. Benchmarking presentations offer an opportunity to expand the audiences of the benchmarking findings and stimulate action to initiate change. The benchmarking team may also communicate benchmarking findings to other members of the organization. Furthermore, identifying possible process improvements and making a plan of action help capitalize on benchmarking results. Lastly, Benchmarking is a not a once-for-all activity, but a continuous process for those who want to maintain a state-of-the-art perspective. The criteria of best practices are always changing; thus, the search for emerging best practices and sources of new information and ideas is a never-ending process. Organizations need to continue to identify benchmarking opportunities in their practices. They need to examine the process during and after each benchmarking cycle to make adjustments in their future investigation.

Benchmarking in Public Parks, Recreation & Leisure Services

In parks, recreation, and leisure services field, there have been some efforts utilizing benchmarking techniques to improve service quality. At the municipal

government level, for example, the Arlington Parks and Recreation Department, Texas conducted a benchmarking study in 1994 on four functions: customer services, front desk operation, athletic field reservations, and speed of golf play. Their benchmarking partners included business of different natures: Marriott Corporation and Fort Worth Zoo (Arlington Parks and Recreation Department, Texas, 1994). The Arlington Parks and Recreation Department received the Texas Quality Award in 1999 and it was the first municipal parks and recreation department from Texas to receive this award (Strayhorn, 1999; Texas Parks and Recreation Department, n.d.). The parks and recreation department of Joplin, Missouri also conducted a benchmarking survey as part of their master plan in 2001 (Joplin Parks and Recreation, 2001). Some other local government conducted a benchmarking study and the municipal parks and recreation services were part of the benchmarking study. For example, the South Carolina Municipal Benchmarking Project included municipal parks and recreation services as one of the areas for the benchmarking study (Government research and service: The SC municipal benchmarking project, n.d.). At state level, the California Department of Parks and Recreation received the California Quality Awards in 1994 and 1995. California State Parks received a Best Practice Award sponsored by the Arthur Andersen Best Practices Program (The California Department of Parks and Recreation, 2001). Oregon Parks and Recreation Department regards benchmarking as one of their major tools to achieve sustainable development objectives in 2014 (Oregon Parks and Recreation Department, 2002).

Although there have been some benchmarking efforts in the parks, recreation, and leisure services field, the documentation of the process is very poor. No comprehensive study has been found in professional journals in parks and recreation field. No benchmarking study in state park systems has been found.

Parks and State Parks

This part of literature review includes an overview of the national parks, the development of state parks in the United States, and the development of the Oklahoma State Parks. An overview of parks is presented first. Because the national parks system had tremendous influence on the development of state parks, the development of the national parks system is discussed next. Lastly, the development of state parks in the United States and the development of the Oklahoma State Parks are discussed.

Parks and National Parks

Definition of Parks and National Parks

It is not easy to give the word "park" a precise definition because it has so many uses and diverse meanings. Overtime, a park has meant a hunting reserve, a garden, or a stadium (Sharpe, Odegaard & Sharpe, 1994). The relative definition of park in this study is "tracts of tax-supported land and water, established primarily for the benefit and enjoyment of the public and maintained essentially for outdoor recreation activities" (Sharpe, Odegaard &Sharpe, 1994, p.4). Parks come in all shapes and sizes and have a variety of names. There are designations for parks that indicate the governmental level administering the area, such as national park and state park.

The International Union for the Conservation of Nature (ICUN) defines a national park as: (1) Where one or several ecosystems are not materially altered by human exploitation and occupation, where plant and animal species, geomorphologic sites and habitats area of special scientific, educative and recreative interest or which contains a natural landscape of great beauty; (2) Where the highest competent authority of the country has taken steps to prevent or eliminate as soon as possible exploitation or occupation in the whole area to enforce effectively the respect of

ecological, geomorphologic or aesthetic features which have led to its establishment; and (3) Where visitors are allowed to enter, under special conditions, for inspirational, educative, cultural and recreative purposes (Machlis & Tichnell, 1985, p. 10).

National Parks

Landrum (2004) suggests that the development of the parks in the United States was closely associated with the societal changes in 19th century. The first "parks" in the United States were the expressions of borrowed urban planning influenced by the design of European cities for centuries. As urban planning developed, more space that was open was included for the increasing need of public recreation as the 19th century progressed. As the nation flourished economically and its population became more urbanized, there was an increasing need for outdoor recreation. At the same time, there was an increasing interest in nature and preserving some of the country's magnificent sceneries. This stimulated the American public park movement and a number of national parks were established for the purposes of preservation of nature and provision of public recreation.

The first national park in the United States as well as in the world was the Yellowstone National Park, established in 1872. A few years after the establishment of the Yellowstone National Park, the Congress established the Mackinac National Park, the second national park in 1875. In 1890, the Congress established two large parks in California, Sequoia National Park and Yosemite National Park. Other national parks established by the end of 19th century included the General Grant National Park in 1890 (incorporated into Kings Canyon National Park in 1940), and the Mount Rainier National Park in 1899.

By 1916, 14 national parks had been established (Mackintosh, 1999). To manage these national parks, the National Park Service Organic Act of 1916 created

the National Park Service (NPS) within the Department of the Interior. Steve Mather was named as the first director of NPS. Under his leadership, the national parks system were established, which included not only national parks, but also national monuments and other resources with natural and historical importance. The national parks continued to develop from western part of the United States to the eastern part after the 1920s, and continued through the 20th century. As of 1999, the national parks system comprises 379 areas in nearly every state and U.S. possession (National Park Service, n.d.)

The NPS had a dual mission of conserving park resources and providing opportunities for people's enjoyment at the time it was established and this mission continues to serve as the foundational guidance of the NPS. The National Park Service Organic Act 1916 specified the mission of national parks is to promote and regulate the use of the national parks to conserve the natural, cultural, and historical resources and therefore, people of current and future generations may enjoy these resources (The National Park Service, n.d.).

The national parks system has had tremendous influences on the development of the state parks in the United States. Steve Mather, the first director of NPS, was instrumental in the development of state parks in the early 20th century. A few states did not start to develop their state parks until the 1930s under the direction of the National Park Service, including Oklahoma. The national parks were the model for the design and development of many state parks.

State Parks

Definition of State Parks

McLean (1998, p.2) defines state parks as "…areas containing a number of coordinated programs for the preservation of natural and/or cultural resources and

provision of a variety of outdoor recreation opportunities". However, state park agencies often administer a broad variety of areas, in addition to state parks. The Annual Information Exchange (AIX) published by the National Association of State Park Directors (NASPD) identifies additional areas that are in the "state park estate", which include state parks, recreation areas, natural areas, historical areas, environmental education areas, scientific areas, state forests, state fish and wildlife areas, other areas, and miscellaneous areas (McLean, 1998; McLean, 1999). A "state park system" consists of state parks and the additional areas mentioned above.

Frederick Law Olmsted (1929) proposed the chief principles that guided the California State Parks in determining the areas to be included in "an ultimate, comprehensive park system" in the early 20th century. These principles had been useful in guiding the state park systems in many other states. These principles are: (1) such areas should be sufficiently distinctive and notable to interest people from distant parts of a state to visit and use them; (2) they contain scenic and recreation resources of kinds not likely to be well conserved and made available under private ownership for the enjoyment of ordinary people; (3) they provide enjoyment that local parks, national parks may not provide otherwise; and (4) they are so geographically distributed as to comprise a wide and representative variety of types for the whole state, and with a reasonable assortment of them equitably accessible to people in each part of the state (p.49).

Stephen Mather was instrumental in the development of state parks in the United States. He said to the assembly at the 1921 National Conference on State Parks, the first conference on state parks, that he believed that comfortable camps should be available all over the country so that the motorists could camp each night in a good scenic spot such as at a state park (Tilden, 1962). Colonel Richard Lieber, a renowned

state park proponent from Indiana believed that state parks are the "show windows of a state." Tilden (1962) agreed, "… state parks are a dedication of the soul of the land. …Our state parks preserve the sources of our inspiration" (p.9). He further explained, "State park must have represented to one a resting place for the people, an open-air haven for urban citizens, an un-commercialized spot where children of all ages could gambol and picnic and camp and stretch and grow in the light of the sun. This had long been a loud imperative for human health and happiness, and such a need for physical recreation grows beyond any contemporary supply" (p.8).

Tilden (1962) classifies state parks into six classifications: parks, monuments, recreation areas, beaches, parkways, and waysides. He (1962) defines a state park as "…a relatively spacious area of outstanding scenic or wilderness character oftentimes containing also significant historical, archeological, ecological, geological, and other scientific values, preserved as nearly as possible in their original or natural condition and providing opportunity for appropriate types of recreation where such will not destroy or impair the features and values to be preserved. Commercial exploitation of resources is prohibited" (p.11-12).

The Purpose of State Parks

"As important they are, however, the national parks are only one component of the vast public park estate in the United States. Probably best known and certainly most widely used of all parks are those countless areas, large and small, provided by local and regional governments" (Landrum, 2004, p.4). State parks fill a niche between the urban parks and the national parks. State parks provide vastly different experiences that can be found in numerous city parks, but they provide similar types of recreational opportunities as national parks have. Therefore, state parks are good close-to-home substitutes for national parks and good complements for urban parks.

State parks provide public outdoor recreation facilities closer to population centers than many of the national parks. State parks focus on resource-based recreation opportunities, which separate them from urban recreation parks. The state facilities create a regional management system for the nation's growing network of parks, and a close relationship between the state and national parks continued to grow.

The landscape architect Harold Caparn (1931) suggests several principles for the development of state parks. First, state parks should not necessarily be confined to the rare and most beautiful scenery. State parks also preserve examples of the average or characteristic scenery of each state. State parks may be areas of beauty and significance, though not in the highest degree, which also offer opportunities for physical recreation to the nearby centers of population. Second, the preservation of clean, readily accessible, enjoyable beaches and lakeshores is important for state parks. Third, the three major service areas that state parks should provide include the preservation of places of historical importance in the life and much of the state's history; available acreage for people nearby to afford picnicking and hiking; and the maintenance of its surroundings.

Wilburn A. Nelson (1931) suggests that state parks should be close to a large population area, and should be "a meeting-place under ideal conditions for all people; an educational place; a recreational place; a health center; a weekend resort for all with change of climate, scenery, and people, where millions can go; a scenic advertising medium for a State" (p.84). The National Conference on State Parks suggests that, "State parks were essentially conservation projects…acquired and established by the States primarily to preserve outstanding examples of the State's scenic, scientific and cultural features…should not be considered as recreation facilities in the sense of city playgrounds" (Landrum, 2004, p.166).

The History of State Parks

The concept of state parks can be traced back to the 1800s. In 1832, the ownership and management of Arkansas Hot Spring was transferred to the state of Arkansas from private ownership (Ibrahim & Cordes, 2002). The first state park in the United States was established through the Yosemite Grant, which included Yosemite Valley and Mariposa Grove of Big Trees, in California in 1864 (Conard, 1997; Sharpe, Odegaard, & Sharpe, 1994). Although the land was initially under federal ownership, the state of California was charged with the preservation and protection of the land. The state of California relinquished the grant lands in 1906 and incorporated it into the surrounding Yosemite National Park. In 1884, Mackinac Island, a former military reserve previously designated as a national park, was transferred from the federal government to the State of Michigan as a state historical park. In 1885, New York established Adirondack State Forest, the first state park that was under state jurisdiction. Minnesota established three state parks: Itasca Lake, Birch Coulee, and Camp Release from 1889 to 1895 (Conard, 1997; Nelson, 1928). In 1895, the first large, extensive state park was created when the nucleus of Palisades Interstate Park of New York and New Jersey was acquired (Nelson, 1928).

In January 1921, the first National Conference on State Parks was held in Des Moines, Iowa (Tilden, 1962). The purpose of the National Conference on State Parks, which later became an incorporated body, was to encourage both the national, state, and local governments and non-governmental agencies to acquire and protect additional land and water areas that are suitable for recreation, for the study of natural history and its scientific aspects, and for the preservation of wildlife (Nelson, 1928). Stephen Mather, the first director of the National Park Service, believed that the time had come when the states should begin to establish systems of recreation areas that

would be comparable in purpose, in choice, in administration, and in benefits to the national parks system (Edginton, Jordan, Degraaf & Edginton, 2002; Tilden, 1962). Mather believed that the National Park Service could not protect all the areas and he saw the state administration as a viable alternative to protect parklands and bring outdoor recreation closer to people who that might not be able to visit national parks. In the early 20th century, there were many visitors to national parks in search for outdoor recreation opportunities. The reduced workweek allowed for more leisure time and the affordability of the automobile created more mobility. The establishment of state parks could serve as a buffer for the recreational demands placed on national parks (Conard, 1997).

When the National Conference on State Parks first met in 1921, only 19 state park systems existed; and there were 29 states that had no state parks at all (Tilden, 1962). Seven states had only one park, including California, Idaho, North Carolina, Kansas, Michigan, New Jersey, and Pennsylvania. Iowa had four parks; there were five each in Ohio and Texas; and six each in Minnesota and Wisconsin. There were seven in North Dakota, a state "that had shown a commendable cultural interest in preserving some of its historic possessions" (Tilden, 1962, p.5). Under various administrative authorities, "New York already had gone furthest" (Landrum, 2004, p.38), with the first state park, the Niagara Reservation State Park established in 1885, which remains the oldest state park continuously in operation in this day (Nelson, 1928). Connecticut already had 22 parks. The National Conference on State Parks in 1921 was monumental in state park development history because it publicized the idea of state parks and started the state parks movement in the consequent years. Following the 1921 Conference, six more states, including Kentucky (1924), Nebraska (1925), Oregon (1925), Utah (1925), Alabama (1927), and Arkansas (1927)

established their respective state park systems (Myer, 1875, Appendix A, pp.38-39).

The economic depression in 1930s gave a boon to parks development, especially the development of state parks. Federal aid programs such as the Civilian Corps Conservation (CCC), the Public Works Administration (PWA), the Works Progress Administration (WPA), and the Civil Works Administration (CWA) put people to work in the parks. Federal aid stimulated an unprecedented level of park movement in the United States.

The CCC contributed more to state park development than any other federal relief program (Conard, 1997). Oklahoma was one of the eight states that acquired their first state parks during the CCC era, among seven other states, Colorado, Mississippi, Montana, New Mexico, South Carolina, Virginia, and West Virginia (The CCC and its contribution to a nation-wide state park recreational program, 1937). By the time the CCC program ended in 1942, the CCC had built or improved 405 state parks in 43 states (Landrum, 2004). The other two programs that directly benefited state parks were the Recreational Demonstration Areas, which contributed almost 300,000 acres of new state park land and the 1936 Park, Parkway, and Recreation Area Study Act, which provided the continued basis of ongoing intergovernmental efforts between federal and state to improve the planning and development of state parks (Landrum, 2004).

During World War II, although the operation and expansion of state parks movement were disrupted, the state parks movement continued to develop and mature in the broader sense (Landrum, 2004). The National Park Service and the National Conference on State Parks continued to work together for the further development of state parks. State parks managed to add 92 new areas and about 350,000 acres overall (Landrum, 2004, p.167). After World War II, the state parks development rebounded.

State parks attendance was on the rise again, more park personnel were employed, and park expenditures were increased. Renewed emphasis was placed on parkland acquisition. In 1946, there were about 1549 areas categorized as state park, and by 1950, the figure increased to 1723, with total acreage exceeding 2.4 million acres (Landrum, p.167).

The decades of 1950s and 1960s were the golden era of outdoor recreation and the development of state parks gained tremendous support from federal government. The Outdoor Recreation Resources Review Commission (ORRRC) was established in 1958 and was charged with studying the national needs and supply of outdoor recreation. The report of Outdoor Recreation Resources Review Commission (ORRRC), *Outdoor Recreation for America*, was completed in 1962. The most significant impact that the report made on the development of state parks was the call for a federal grants-in-aid program to assist the outdoor recreation planning and the acquisition and development of additional parks and recreation areas.

The Bureau of Outdoor Recreation was established in 1962 to coordinate and provide assistance to states for outdoor recreation programs (Douglass, 1999; Landrum, 2004). The Land and Water Conservation Fund (LWCF) Act in 1964 once again prompted a level of expansion of state parks that had not been seen since the 1930s. The LWCF was the most important fund for acquiring and developing state and local parklands (Conard, 1997; Myers, 1989). The funds could be used for three purposes: comprehensive recreation planning, land acquisition, and development of outdoor recreation facilities. Grants could not be used to maintain existing facilities. Federal money would pay half of the cost of an approved project, and the recipients pay the other half themselves. From 1965 to 1987, $3.2 billion federal grants were appropriated to fund state and local projects nationwide (Conard, 1997, p.244). The

1960s was also the time that the role of state parks started to change in a fundamental way (Landrum, 2004, p.197). For the most part of the 20th century, the primary goal of state parks movement was to acquire properties for public enjoyment and it had made tremendous achievement. Then, starting from 1960s, the focus shifted to systematic and comprehensive planning and implantation of policies and programs to meet the increasing and diversified demand for recreation that people wanted. With Alaska add their state park system in 1970, the state parks picture of the United States was complete. Every state has a state park system in place that has played a vital role in protecting the United States' legacy and public parklands, as well as providing various recreation opportunities for people.

Diversity and Similarity of State Park Systems

State parks are characterized as much by their similarities as their differences (Landrum, 2004; McLean, 2000). There are tremendous differences among state parks in resources, size, types of administration, available facilities, financing, visitation, management concepts, and so forth. The resources in state parks systems are as diverse as the states, ranging from deserts in Nevada, lakes in Minnesota, to mountains in the Carolinas, and ocean beaches in California. The size of state park systems ranges from the smallest Rhode Island State Parks of 9,000 acres, to the largest Alaska State Parks of over three million acres. The number of annual visitors varies from nearly to one million to over eight million. State park systems are managed under different administrative agencies across states. For example, Alabama State Parks is under an environmental super-agency, the Department of Conservation and Natural Resources. Oklahoma State Parks is a part of a smaller state agency division, the Oklahoma Tourism and Recreation Department. Arizona State Parks is under a separate parks department, Arizona State Parks.

Several factors may contribute to such differences including history, political trends, inter-government relationships, and prevailing management philosophy (Edginton, et al., 2002). Yet, state park systems also have many similarities. For instance, state parks are usually relatively close to urban areas, which are easily accessible to dense population areas. Many state parks provide a variety of recreation opportunities such as camping, picnicking, hiking, swimming, fishing as well as overnight stays in rustic cabins and resort-type lodges. Many state parks provide diverse developed facilities such as golf courses, swimming pools, visitor center, and restaurants.

Oklahoma State Parks

The development of Oklahoma State Parks dates back to the 1930s, thanks to the Emergency Conservation Works. The Emergency Conservation Works, popularly known as the Civilian Conservation Corps (CCC) program, was initiated by President Franklin D. Roosevelt in 1933 as part of the New Deal. The purpose of the CCC program was to recruit young and unemployed men to relieve unemployment through the performance of public work. For a state to be eligible for the CCC program, the state must have state-own lands on which to conduct the work. This "provided the stimulus for some of the most aggressive, expeditious, and innovative land acquisition efforts the country has ever seen, and therein lies probably the greatest contribution the CCC program made to America' state park movement" (Landrum, 2004, p. 132). Oklahoma was among the states that developed their first state park during this period. The state parks in Oklahoma were built with the principle of being within 75 miles of more than 60% of the population of the state. There were seven original state parks: Beavers Bend, Boiling Springs, Lake Murray, Osage Hills, Quartz Mountain, Robbers Cave, and Roman Nose. These seven original state parks were developed mainly from

1933 to 1935 through the work the CCC (Oklahoma State Parks, 1946).

The CCC's work prompted the development of the Oklahoma State Parks. The Oklahoma State Parks continued to develop from the 1940s to the 1960s, although the administration of state parks experienced some changes. In the 1930s and the 1940s, the operation of state parks was a division of the Oklahoma Planning and Resources Board. Beginning from 1965, the Oklahoma Industrial Development and Park Commission replaced the Oklahoma Planning and Resources Board and the Division of Parks, Recreation and Waterways was charged with the operation and management of state parks under the Oklahoma Industrial Development and Park Development. In 1972, the Oklahoma Industrial Development and Park Development was replaced by the Oklahoma Tourism and Recreation Commission. Oklahoma Tourism and Recreation Department (OTRD) is the administrative agency of the Oklahoma State Parks today (Neal, 1999).

Currently, Oklahoma State Parks has 50 state parks, including two resort parks, four state lodges, 455 cabins and 10 golf courses. Oklahoma State Parks has 63 lease concessionaires, 85,000 acres of state-owned or leased land, 2,200 structures and facilities, with a total of $212 million in assets (Caneday, Jordan, Liang, & Caneday, 2004). Oklahoma State Parks play an important role to the travel and tourism, which is the state's second largest industry in terms of economic impact and third largest business regarding total employment, in Oklahoma. Oklahoma State Parks not only contribute to the state's economic development, but also serve as a catalyst for rural development statewide. Variety is a characteristic of the Oklahoma State Parks. The size of the state parks ranges from merely 10 park acres to almost 3,000 park acres (Oklahoma State Parks & Resort Guide, 2003). The total annual budget is about $45 million, with 14 million visitors annually (Landrum, 2004, p.264-265). The Oklahoma

State Parks is one of the divisions of the Oklahoma Tourism and Recreation Department (OTRD). The OTRD is a hierarchical organization with lines of authority flowing from the central office in Oklahoma City through regional office to the park units (The Oklahoma State Park System…A National Park Service perspective, 1992).

The "Best" State Park System

Some attempts have been made to select the "best" state park system. For example, in 1994, the National Geographic Traveler magazine published an article on the 10 best state parks in America (Kostyal, 1994). *Family Fun* magazine took a similar approach in an article of "America's Great State Parks". The travel book, *Frommer's America's 100 best-loved state parks* is another example. In 1997, *National Geographic's Guide to the State Parks of United States* was published. However, the perceptions of travel writers might be quite different from the state park professionals' perceptions of the "best park management" (Landrum, 2004). Furthermore, these commercial publications focused on individual parks rather than an entire state park system.

One recent attempt to comprehensively evaluate state park system is the establishment of Gold Medal Awards program sponsored by the National Sporting Good Association Sports Foundation, with the assistance of the National Recreation and Park Association, the American Academy for Park and Recreation Administration, and others (National Recreation and Park Association ,n.d.; Gold Medal Award Program 2004, n.d.). The Gold Medal Award Program is an exclusive award for state park systems that was established in 1996 and was initiated in 1997. The program focuses on the achievement of state park systems and their contribution to the citizens of their state. Any state park system in the United States can apply for the award by answering the questions. Three finalists are chosen and the winner is decided from the

finalists' list. The award is presented every other year. The judging criteria include customer service; facilities and recreational offerings; innovations; and management and relations with the community. Four state park systems had won this award and they were (1) Ohio State Parks in 1997; (2) Florida State Parks in 1999; (3) Virginia State Parks in 2001; and (4) New York State Parks in 2003.

However, there have been some questions on this program. For example, Landrum (2004) questions whether the Gold Medal Award Program could truly represent the nation's "most outstanding state parks system" (p.218). According to the rules of the Gold Medal Award program, the winner would not be eligible for participation in the award in five years after its winning. Although such a rule may encourage participation of state park systems, it may also prevent those park systems that maintain their excellence from being recognized. Furthermore, due to its lengthy application procedure, some state park systems may choose not to participate in this award although their operation and management may be outstanding. "There are too many diverse factors at play to allow easy analysis and comparison. For a truly adequate understanding of what makes the state park program tick, it would be necessary to examine all of those determinative factors in some detail" (Landrum, 2004, p.219).

Review of Delphi Technique

This part of literature presents an overview on the Delphi technique, which was utilized in this study. A Delphi technique was used to determine the benchmarking performance measures in this study.

Nominal Group Technique (NGT)

Nominal Group Technique (NGT) is a technique that helps prioritize issues. NGT is a structured process that identifies and ranks the major problems or issues that

a group is facing, which is often facilitated by a facilitator. “It is concerned with judgmental decision making” (Delbecq, Van de Ven, & Gustafson, 1975, p.5). Andre L. Delbecq and Andrew, H. Van de Ven developed NGT in 1968 based on organizational planning processes. NGT is necessary when planning processes are faced complex situations. Such situations may include the following: when an organization has limited understanding of available solutions due to lack of modeling or experimental evidence by earlier organizations; and the program will have a great impact on current organization (Brief, Delbecq & Filley, 1974). NGT is a special purpose technique where individual judgments must be tapped and combined to arrive at decisions that cannot be made by one person. NGT is effective at gaining consensus with all types and levels of participants in a wide range of settings.

Delphi Technique

Delphi technique is one of the Nominal Group Techniques that elicits information and judgments from participants to facilitate problem solving, planning, and decision-making. Delphi technique does not require participants to be physically together. Instead, a coordinator use mails, emails or fax to facilitate the exchange of information among participants (Dunham, 1998). Like Nominal Group Technique, it is a means to aggregate the judgments of a number of individuals to help make better decisions. “It is particularly useful for involving experts, users, resource controllers or administrators who can not come together physically” (Dunham, 1998, p.83).

Delphi technique is a structured group process that includes two major stages: a fact-finding stage and an evaluation stage. The fact-finding stage is the generation of ideas from each group member. The evaluation stage is the screening and synthesizing the ideas suggested by group members. “The Delphi Technique is a method for the systematic solicitation and collation of judgments on a particular topic through a set

of carefully designed sequential questionnaires interspersed with summarized information and feedback of opinions derived from earlier responses" (Delbecq, Van de Ven & Gustafson, 1975, p.10).

Process

Delphi technique is essentially a series of questionnaires. The first questionnaire asks a broad question for individuals to respond. Each subsequent questionnaire is built upon responses to the preceding questionnaire. The process stops when participants reach consensuses. For a homogenous group of people, 10 to 15 people are appropriate (Delbecq, Van de Ven & Gustafson, 1975). The first questionnaire usually includes one or two open-ended questions. The analysis of the first questionnaire results in a summary list of items identified and comments made by participants. This summary should reflect the initial opinions of respondents concerning key variables, yet short enough for all respondents to review easily. For the second questionnaire, it is important that each item accurately convey the meaning that respondents attempt to communicate through the first questionnaire.

The second questionnaire asks participants to review the items identified in the first questionnaire as summarized, argue in favor or against those items, or clarify items. Respondents are asked to rank items to establish preliminary priorities among the items. Through the second questionnaire, areas of agreement/disagreement and areas that need clarification are identified and an early understanding of priorities emerges. The analysis of the second questionnaire includes tallying votes for items and summarizing comments about the items in a way that is both "thought-provoking and easy to understand" (Delbecq, Van de Ven & Gustafson, 1975, p.100).

The third or the final questionnaire permits the participants to review the prior responses and express their individual judgments about the importance of each item.

It provides the closure of the study and suggests the areas where diverse judgments exist as well as areas of agreement. The three-step Delphi technique is very commonly used. If additional information must be obtained, the number of the Delphi questionnaires can be extended to five (Delbecq, Van de Ven & Gustafson, 1975).

CHAPTER III

RESEARCH METHODOLOGY

Overview

This study was designed to explore the application of benchmarking technique in state park systems. The entire research process was to build a benchmarking process model and test this model in the study. The benchmarking process in this study used the Deming Cycle as the basis and followed four major phases: Plan, Collect, Analyze, and Improve (APQC, 1993; Watson, 1993). This chapter explains the general research framework first and then discusses the detailed steps in each phase.

Research Framework

Figure 3 in the following page illustrates the research framework of this study. Each step of the study was built upon the results and analyses of the former steps in the diagram. The first six steps were the focuses of the study.

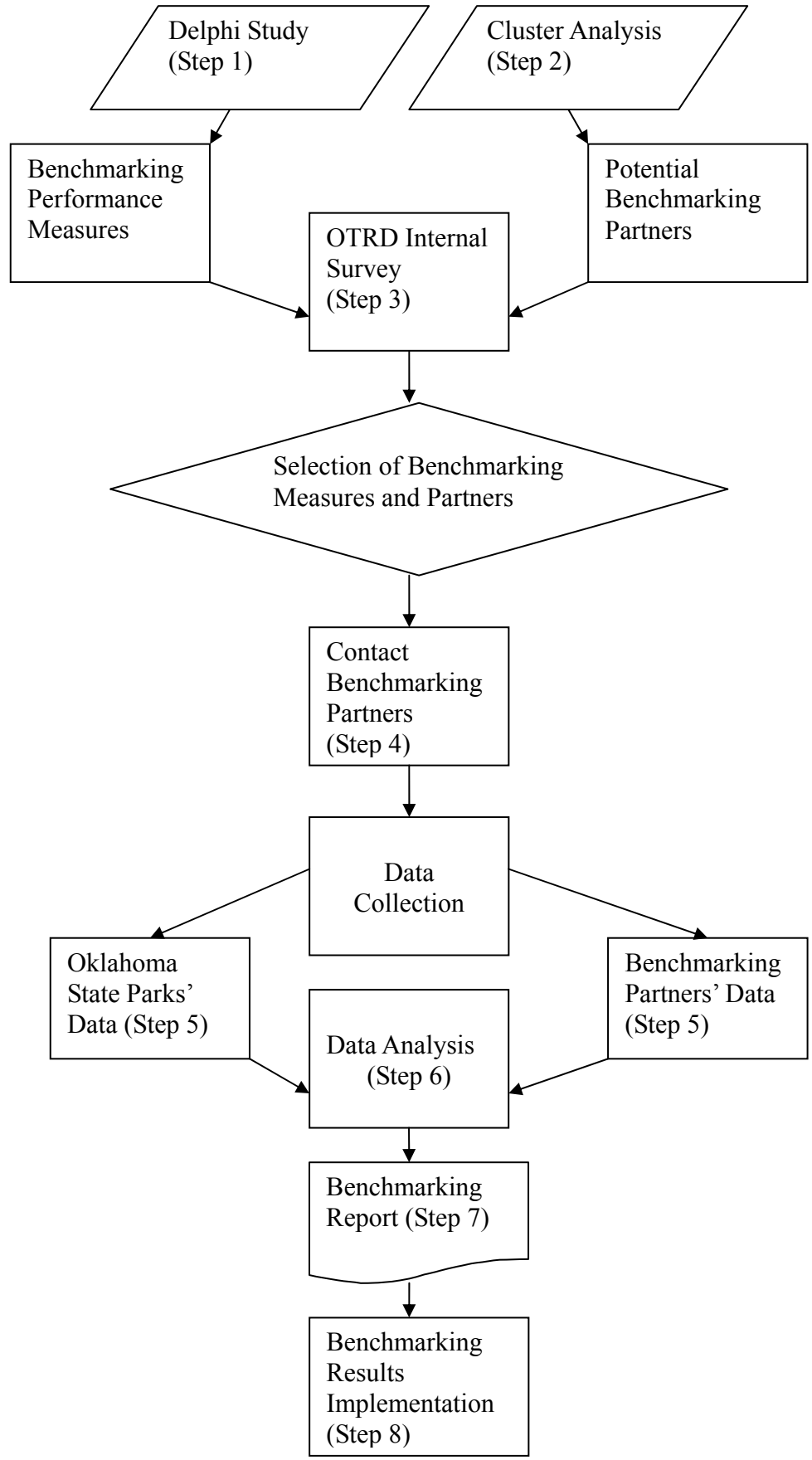


Figure 3. Research Framework

Phase One: Plan

Step One: Delphi Technique to Identify Benchmarking Measures

The first step of the study utilized a three-step Delphi technique through electronic mails to identify the benchmarking performance measures. At the first stage, all 50 state park directors who were the members of the National Association of State Park Directors (NASPD) were contacted with an invitation to provide input on essential factors in conducting a benchmarking study in state parks. The members of NASPD were chosen to serve as the expert panel for the Delphi study because they were experienced and knowledgeable professionals in state park administration and operation. They were asked to suggest performance measures on which state parks should be benchmarked. After the responses were gathered, the measures proposed by members of the Delphi expert panel were summarized and categorized into groups.

At the second stage of the Delphi process, the second questionnaire, which was based on the summary of the first round of responses, was sent out. The participants were asked to review the measures as summarized and to clarify the items identified. This questionnaire also asked participants whether they would agree or disagree with the items as summarized and invited them to add additional comments or suggestions, if needed. The results of the second questionnaire were summarized and the third questionnaire was produced based on the responses of the second questionnaire.

The final Delphi questionnaire, where the proposed factors were grouped into categories based on the responses of the second questionnaire, was sent to the respondents. Participants were asked to rate the proposed factors using a 4-point Likert-scale, from (1) extremely unimportant, (2) unimportant, (3) important, to (4) extremely important. The results of the final questionnaire were analyzed. The factors that had rating scores above three (important) on a 4-point Likert scale were kept and

rating scores lower than three (not important) were dropped from the list. Through the Delphi study, important benchmarking performance measures were identified. The results can be found in the first section of Chapter IV.

Step Two: Cluster Analysis to Identify Benchmarking Partners

A cluster analysis was utilized to identify the benchmarking partners. As indicated earlier, one of the essential benchmarking principles is to compare with benchmarking partners that are similar to oneself in order to learn from others and implement what is learned into one's own operation. Based on this principle, the researcher used a cluster analysis to distinguish the state park systems that were similar to the Oklahoma State Parks and the state park systems that were dissimilar to the Oklahoma State Parks.

Cluster analysis is a method of grouping objects of a similar kind into respective and meaningful categories. The primary reason for the use of cluster analysis is to discover groups of similar entities in a sample data (Aldenderfer & Blashfield, 1984). Cluster analysis is used mostly frequently when researchers do not have a priori hypotheses, but are still in the exploratory phase of research (StatSoft, Inc., 2004).

In this study, the researcher used the K-means cluster analysis. Aldenderfer and Blashfield (1984) refer to this method as an iterative partitioning method. K-means clustering splits a set of data into a selected number of groups by maximizing between variations relative to within variation. K-means cluster analysis attempts to identify relatively homogeneous groups of cases based on selected characteristics (Hartigan, 1975). Furthermore, unlike the hierarchical methods, K-means cluster analysis produces single-rank clusters that are not nested and therefore are not part of a hierarchy.

The data used in the K-means cluster analysis were based on the 2004 Annual Information Exchange (AIX) from the National Association of State Park Directors (NASPD). The Annual Information Exchange (AIX) is "the primary source of data available to state park directors and researchers, dealing exclusively with state parks" (McLean, Chavez, & Knapp, 1999, p.2). The National Association of State Park Directors (NASPD) publishes the AIX each year. The AIX questionnaire is a 19-page long survey instrument that includes data for seven areas concerning state parks: (1) inventory of areas; (2) types of facilities; (3) visitation and use; (4) capital improvement; (5) financing; (6) personnel; and (7) support groups. The AIX questionnaire is mailed every year to the 50 state park directors in the United States and designated individuals complete the survey instrument. The data are compared to each previous year's data to ensure accuracy (McLean, Chavez, & Knapp, 1999). In this study, 30 quantitative characteristics that reflected the major features of state park systems from the 2004 AIX were selected for the K-means cluster analysis. These 30 characteristics included five aspects: property characteristics, amenity characteristics, visitor characteristics, operation characteristics, and personnel characteristics.

The property characteristics included: (1) number of property; (2) number of parks; (3) number of recreation areas; (4) number of natural areas; (5) number of historical areas; (6) number of environmental education areas; (7) number of scientific areas; (8) number of forests; (9) number of fish and wildlife areas; (10) total acreage (11) number of trails; and (12) miles of trails.

The amenity characteristics included: (1) number of cabins; (2) number of lodges; (3) number of restaurants; and (4) number of golf courses.

The visitor characteristics included: (1) number of day-use days and (2) number of overnight days.

The operation characteristics included: (1) total operation budget; (2) total annual revenue; (3) revenue from general funds; (4) revenue from dedicated funds; (5) total capital expenditure; (6) revenue from entrance fees; (7) revenue from concessions; and (8) types of dedicated funds.

The personnel characteristics included: (1) central office personnel; (2) part-time central office personnel; (3) full-time field positions; and (4) part-time field positions.

The results of the K-means cluster analysis can be found in the second section of Chapter IV. Further analyses utilizing analysis of variance (ANOVA) were conducted to discover the significant descriptors in determining clusters among these 30 factors. The alpha level was set as .01 level.

Step Three: Gaining Internal Input

In a benchmarking study, it is important to gain input from the organization that conducts the benchmarking study. Therefore, in this study, the researcher designed an internal data collection process to gain input from the staff of the Oklahoma Tourism and Recreation Department (OTRD) on the final determination of benchmarking performance measures and benchmarking partners. This questionnaire gained approval from the Institutional Review Board (IRB) of Oklahoma State University.

This questionnaire consisted of three major sections. The first section of the questionnaire presented the results of Delphi study, which were the important benchmarking performance measures suggested by the Delphi panelists. The participants were asked whether this benchmarking study should include all the suggested measures or should include only some of the suggested measures. The researcher explained to the survey participants that a benchmarking study that included all the suggested benchmarking measures would collect information on a

larger scope but with less in-depth information on each factor while a benchmarking study that would include only part of the suggested measures would collect more in-depth information but within a limited scope.

In the second section of the questionnaire, participants who suggested a benchmarking study that would include only part of the suggested measures were asked to rank the top three important measures among the suggested measures. They could also suggest measures that they believed were important and should be included in the benchmarking study.

In the third section of the questionnaire, participants were asked to choose state park systems that were similar or dissimilar to the Oklahoma State Parks. Furthermore, they were asked to name a desirable state park system as a benchmarking partner for the Oklahoma State Parks and provide rationale for their selection.

The self-administered questionnaire was conducted electronically. The researcher sent the electronic link for the online survey to the contact person who was responsible for this research project in the State Parks Division of the Oklahoma Tourism and Recreation Department through electronic mail. Then, this contact person forwarded the link to the survey participants through an electronic mail list. The participants of this questionnaire included the commissioners of the Oklahoma Tourism and Recreation Commission, the executive director of the Oklahoma Tourism and Recreation Department, division heads, and regional managers of Oklahoma State Parks.

Step Four: Gaining Cooperation from Benchmarking Partners

After the benchmarking partners were determined, informal contacts were made to the selected state park systems to ask their cooperation to participate in the benchmarking study at first. The researcher met the directors of the state park systems

that were the potential benchmarking partners at a national conference. All of the representatives from the chosen state park systems indicated interests in participating in this study. Formal contacts were made next. An invitation letter from the Secretary of Commerce of Oklahoma and an invitation letter from the researcher were sent to the selected benchmarking partners. The selected state park systems that agreed and participated in the study became the benchmarking partners for the Oklahoma State Parks in this study.

Phase Two: Collect

Step Five: Understand Performances through Benchmarking Survey

Based on the Delphi study results and the internal survey with the OTRD staff, a questionnaire was designed to elicit detailed information about the management and operation of the Oklahoma State Parks and that of the benchmarking partners. Since some of the important measures for the benchmarking study were available from the 2004 AIX provided by the National Association of State Park Directors, to avoid redundancy, such information was not included in the benchmarking survey. This benchmarking questionnaire gained approval from the Institutional Review Board (IRB) of Oklahoma State University.

The benchmarking questionnaire was divided into eight sections, reflecting the eight important benchmarking performance measures on the management and operation of state park systems. There were seven questions in the first section of "Financial Support", including one question on allocation of operating budget to personnel and six questions on capital funds and expenditure. On the second benchmarking measure, "Concessionaire", 11 questions were asked. The questions covered the following aspects: concessionaire fees, concessionaire performance objective, evaluation of concessionaire service, length of concessionaire contract,

ownership of concessionaire facilities, and type of concessionaire facilities. The third section concentrated on “Marketing and Public Information” with 20 questions. There were six questions on marketing, five questions on public input on management on state parks, five questions on reservation system, and four questions on interpretive programs. The fourth section focused on “Maintenance”, which included nine questions. There were seven questions in the fifth section of “Planning”, which mainly focused on the master planning process of state park systems. The sixth section was the section of “Public Involvement and Constituent Understanding”. This section included 13 questions on citizen support for state parks and provision of services to under-served populations by state parks. The seventh section of questionnaire was “Staffing and Personnel”, which included 15 questions on job classification, turnover rate, staff qualifications, and staff development in state park systems. The last section of “Stewardship” mainly focused on resource protection efforts by state park systems with 13 questions.

In total, there were 95 questions in the questionnaire. The questionnaire included both close-ended and open-ended questions, with the majority being close-ended questions. Some open-ended questions required respondents to provide specific figures concerning the operation of the state park systems or descriptions on plans and programs. The participants were also asked to provide contact information including name and phone number for future contact in each section. The participants could add additional comments in each section.

The questionnaire was revised several times with suggestions from the State Parks Division of OTRD. The questionnaire was color-coded using paper of different color for each section in order to help survey respondents to distinguish questions from the respective sections. The questionnaires were sent to the directors of

Oklahoma State Parks and the state park systems that agreed to participate in the study through both postal mail and electronic mail with word attachments. The respondents could choose either method to respond at their convenience. Two electronic mails reminders were sent to the respondents as follow-ups.

Phase Three: Analyze

Step Six: Analyze the Benchmarking Findings

The Statistical Package for Social Sciences (SPSS) V. 11.5 and Microsoft Excel were used to analyze the data. The statistical analyses used in this study included K-means cluster analysis, ANOVA, descriptive analyses, and qualitative analyses.

Phase Four: Improve

Step Seven: Communicate Benchmarking Findings

A separate report on the findings of the benchmarking study was written and will be presented to the Oklahoma Tourism and Recreation Development. The benchmarking partners that participated in this study will also receive the report.

Step Eight: Implement Findings

The implementation of benchmarking results is very important for a benchmarking study. However, due to time and resource limitations, the implementation of the benchmarking results was not the focus of this study. Based on the findings, the researcher made recommendations on the implementation of the benchmarking results in the Oklahoma State Parks.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter describes and discusses the benchmarking process and the corresponding results of each benchmarking step. Since the first six steps were the focuses of this study, this section includes the results of determination of benchmarking performance measures, analyses of benchmarking measures, determination of benchmarking partners, and the analyses of benchmarking survey results.

Delphi Study Results in Determination of Benchmarking Measures

This section answers research question 3: What are the important benchmarking performance measures that can be used in benchmarking study in state park systems?

Twelve members of the NASPD participated in the Delphi study. These twelve participants were the representatives from Idaho, Iowa, Indiana, Kansas, Maryland, Massachusetts, Mississippi, North Dakota, Oregon, Virginia, Washington, and Wisconsin.

Through a three-step Delphi study process, eight categories of benchmarking performance measures were identified. These eight categories of benchmarking measures were: (1) financial support; (2) concessionaires; (3) marketing and public information; (4) maintenance; (5) planning; (6) public involvement and constituent understanding; (7) staffing and personnel; and (8) stewardship.

Specifically, financial support included: (1) operation costs versus revenue collection; (2) revenue based on expense; (3) state appropriations as a percentage of

operation; and (4) visitation based on staffing.

Concessionaires included: (1) net profit from concessions and (2) performance objectives for concessionaires and contractors.

Marketing and public information included the following factors: (1) satisfaction index with replicated survey on a regular basis for tracking (clean restrooms, friendly staff, fees, condition of facilities; (2) accessibility of the website to members of the public, including those with special needs; (3) accessibility of the regular business lines to members of the public including those with special needs; and (4) accessibility of email responses to members of the public including those with special needs.

Maintenance included: (1) backlog (in dollars and number of projects) of facility repair, renovation, and reconstruction needs; (2) budget (annual) for the agency and per property for maintenance; and (3) facility maintenance tracking (accomplishments versus backlog).

Planning included: (1) the existence of up-to-date master plan for the state park system (interactive, dynamic plan linked to the long-term vision of the park system); (2) the existence of defined vision for the state park system and the opportunities it offers; (3) the existence of resource management plans for each park that prescribe the management of the park's natural resources to assure sustainability for the enjoyment of resources by current and future generations; and (4) the use of management models (Limits of Acceptable Change, Visitor Experience and Resource Protection, Recreation Opportunity Spectrum) for planning and operations.

Public involvement and constituent understanding included: (1) park visitation data: detail on types of visitors (day versus overnight, group versus family or individual, special needs; total numbers of visitors for the system and by property);

(2) organized volunteer groups for each field site and at least one with an "agency-wide" perspective (performance measures/responsibilities for support groups); and (3) responses to a well designed and reliably/validly distributed annual customer survey.

Staffing and personnel included: (1) equitable staff compensation in comparison to other government agencies and private industry; (2) staffing to provide desired level of security, resource protection, and public education at each park; (3) proportion of staff who have completed competency, intermediate, and advanced levels of training (staff qualification); and (4) ratio of frontline staff to visitors.

Stewardship included: (1) baseline inventory of natural/cultural resources with a monitoring process to determine level of care to protect or enhance those resources and (2) percentage of properties following an annual review of 'best management practices' for natural and historic resources.

Cluster Analysis Results in Determination of the Benchmarking Partners

K-means Cluster Analysis

This section answers research question 4: Which state park systems are the appropriate benchmarking partners for the Oklahoma State Parks?

As indicated in the previous chapter, the researcher selected 30 factors from the 2004 AIX for a K-means analysis in order to identify the state park systems that were similar to the Oklahoma State Parks and the state park systems that were dissimilar to the Oklahoma State Parks. The K-means cluster analysis divided the 50 state park systems into different groups according to the number of the clusters that were specified. For example, a four-cluster solution divided the 50 state park systems into four groups and a five-cluster solution divided the 50 state park systems into five groups and so forth.

The researcher explored a four-cluster solution, a five-cluster solution, a six-cluster solution, a seven-cluster solution, an eight-cluster solution, a nine-cluster solution, and a ten-cluster solution. After comparing these solutions, the researcher determined that the seven-cluster solution was the best solution in this study. The four-cluster, five-cluster, and six-cluster solutions were not chosen because these solutions were too general to reflect the distinct characteristics of each cluster. The eight-cluster, nine- cluster, and ten-cluster solutions were not selected because the clusters were too discrete to reflect a cohesive group membership. Therefore, the seven-cluster solution was the most appropriate one. Because the factors had different scales, the data were standardized before the K-means cluster analysis was performed. The standardized scores, z-scores, were used in the K-means cluster analysis. The results are shown in Table 1.

Table 1

Seven-cluster Membership

Cluster	State Park Systems (Distance from the Cluster Center)	Total Number in the Cluster
1	CO (3.975), ID (3.379), MT (6.219), NH (2.031), ND (2.000)	5
2	AK (6.570), AZ (2.405), AR (2.167), CT (2.762), DE (1.981), HI (1.536), KS (2.635), LA (2.244), ME (2.785), MA(3.051), MN (4.762), MS (1.973), NE (3.290), NV(1.589), NJ (2.171), NM (2.405), NC (1.633), PA (6.365), RI (1.896), SC (1.710), UT (1.726), VE (2.475), VA (2.586), WI (2.162), WY (1.822)	25
3	AL (2.485), GA (2.436), IN (2.820), KY (5.265), OH (4.846), OK (3.868), SD (3.112), TN (4.094), WV (2.259)	9
4	FL (6.002), IL (5.854), MI (3.487), MO (3.689), OR (2.953), TX (4.262), WA (3.751)	7
5	CA (0.000)	1
6	NY (0.000)	1
7	IA (4.211), MD (4.211)	2

The first group included five state park systems. This group was named as "Rural Western State Park Systems". The state park systems in this group were relatively small in total acreage, with an average of about 120,000 acres. Among their properties, there were a small number of "state park" designations, which was less than 25% of the total property on average. These state park systems did not have amenities such as lodges, golf courses, or restaurants. They had cabins on their properties though. State park usage was light, with annual visitation of slightly over four million. Day use visitors were overwhelmingly the majority of the visitors (over 90%). Most of these state park systems had a variety of dedicated funds. The operational budget was small to medium, ranging from 2 million dollars to 27 million dollars. Most of these state park systems had less than 100 field positions, with 0.5 field staff member per property on average.

The second group consisted of 25 state park systems. This group was characterized as "Traditional Medium-sized State Park Systems". These state park systems had an average acreage of nearly 250,000 acres. There was a variety of property designations in these state park systems, such as recreation areas, natural areas, and historical areas in addition to "state park" designations. The "state park" designations were nearly 50% of the total number of properties on average. Most of these state park systems had cabins, but few had other developed amenities such as lodges, restaurants, and golf courses. The total number of visitors in these systems was about seven million annually. The operational budget of these state park systems was moderate, approximately 20 million dollars on average. There were two field staff members per property on average.

Along with eight other state park systems, Oklahoma State Parks belonged to the third group. This group was characterized as "Well-developed and Well-staffed

State Park Systems". In these park systems, "state park" designations were the majority of the property, which was about 70% of the total property. These state park systems included a number of cabins and other amenities such as lodges, restaurants, and golf courses. The annual visitors averaged around 18 million. Most of these park systems did not utilize entry fees. The operational budget was large, averaging 47 million dollars. There were more than seven field staff members on each property.

The fourth group included seven state park systems, which was classified as "Heavily-used, Large State Park Systems". These park systems had a large number of properties, averaging over 140, with one-third designated as "state park". There were few trails in these park systems, with less than five designated trails on average. These state park systems had a number of developed amenities, including over 170 cabins, four lodges, four restaurants, and one golf course in total. The operational budget was large, topping 50 million dollars on average. Among these seven state park systems, six are in the top 20 most populous states in the United States. Therefore, it was not surprising that these park systems were heavily used, with annual visitors of over 28 million. There were about three field staff members on each property.

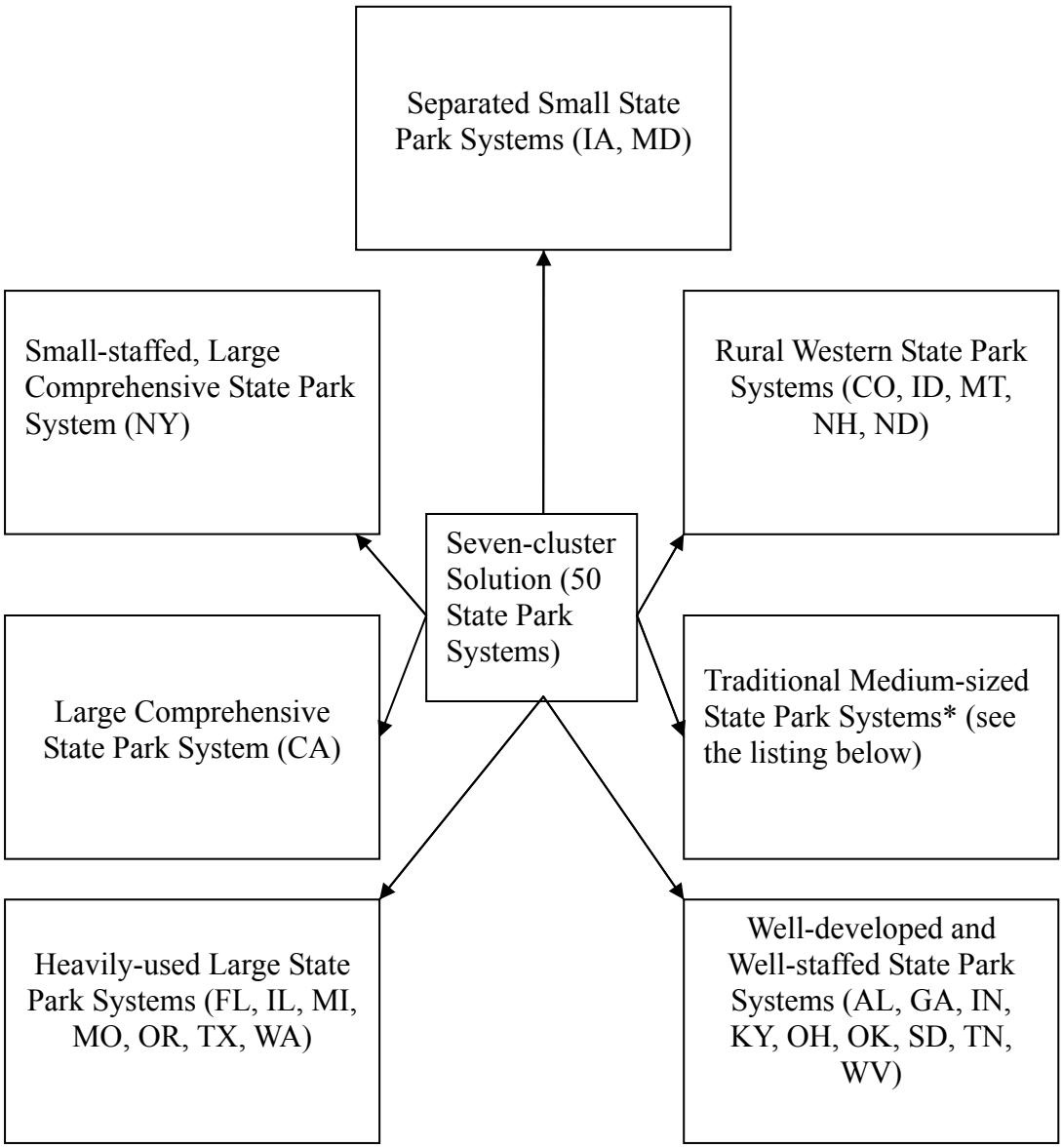
The fifth group and sixth group were single member clusters, with California State Parks and New York State Parks in each group respectively. Interestingly, both of California State Parks and New York State Parks were not only the single member cluster in the seven-cluster solution, but also the single member cluster in the four-cluster, the five-cluster, the six-cluster, the eight-cluster, the nine-cluster, and the ten-cluster solutions. This indicates that California State Parks and the New York State Parks were so unique that they were completely distinct from other state park systems.

The California State Parks was called "Large Comprehensive State Park System", which had over 250 properties, with a variety of areas in addition to "state

park" designations, including recreation areas, natural areas, and historical areas. The system included almost 1.5 million acres of land and almost 2000 trails. The system provided a variety of amenities: 60 cabins, 5 lodges, 14 restaurants, and three golf courses. The California State Parks received more than 80 million visitors annually. It had a 290 million dollars operational budget with numerous dedicated revenue sources. The system had about four field staff members per property.

The New York State Parks had the largest number of properties of all the states. This cluster was named as "Small-staffed, Large, Comprehensive State Park System". The system had over 860 properties with a great variety of property designations. The total acreage topped 1.5 million acres. The system operated over 750 cabins, four lodges, 28 restaurants, and 19 golf courses. The system received over 50 million visitors annually. The New York State Parks had a 160 million dollars operational budget with numerous dedicated revenue sources. Interestingly, they had a very small number of staff , with an average of one field staff member per five properties. This implies a reliance on a great number of contracted labors for the state park system.

The last cluster included two state park systems: Iowa State Parks and Maryland State Parks. This group was labeled as "Isolated Small State Park System". There were 100 properties on average, with one third designated as "state park". The total acreage of property was over 160,000 acres. They had only two trails in total. The two systems operated over 200 cabins and one restaurant, but no lodges or golf courses. The annual visitors averaged over 12 million. The operational budget was 27 million dollars on average with many dedicated revenue sources. Neither of the two systems utilized entry fees. The field staff averaged at two per property. Figure 4 summarizes the above seven clusters.



*Note: This group includes the state parks systems of the following states: AK, AZ, AR, CT, DE, HI, KS, LA, ME, MA, MN, MS, NE, NV, NJ, NM, NC, PA, RI, SC, UT, VE, VA, WI, WY.

Figure 4

Seven-cluster Solution Diagram

Significant Descriptors of Clusters

In addition to performing K-means cluster analysis to group the 50 state park systems and identify state park systems that were similar and dissimilar to the Oklahoma State Parks, the researcher conducted analysis of variance (ANOVA) to discover the significant descriptors among the 30 characteristics in determining the clusters. The alpha level was set at .01 level.

As presented in Table 2 and Table 3, the results showed that among the 12 property characteristics, eight characteristics were significant and they were: (1) number of property; (2) number of state parks; (3) number of recreation areas; (4) number of environmental areas; (5) number of scientific areas; (6) number of forests; (7) number of trails; and (8) miles of trails.

Table 4 shows the significant factors among the amenity characteristics. All of the four characteristics: (1) number of cabins; (2) number of lodges; (3) number of restaurants; and (4) number of golf courses were significant descriptors. Table 5 presents the results of the significant descriptors among the visitor characteristic. The number of day use and the number night use were the significant descriptors.

All the operation characteristics were significant descriptors, as demonstrated in Table 6 and Table 7. These eight characteristics included: (1) total operation budget; (2) total annual revenue; (3) revenue from general funds; (4) revenue from dedicated funds; (5) total capital expenditure; (6) revenue from entry fees; (7) revenue from concessions; and (8) types of dedicated funds.

In personnel characteristics, three of the four characteristics were significant, as shown in Table 8. Full-time central office personnel, part-time central office personnel, and full-time field positions were significant descriptors.

In summary, among the 30 characteristics, 25 characteristics were significant

descriptors for distinguishing differences among clusters and five characteristics were not significant. The characteristics that did not contribute to the distinction among clusters were: (1) number of natural areas; (2) number of historical areas; (3) number of fish and wildlife areas; (4) total acreage, and (5) part-time field positions.

Additionally, the researcher compared the mission statements of the 50 state park systems and the type of agencies in which the 50 state park systems were housed. The results showed that these elements were not significant in determining the clusters. Furthermore, to test the stability of the clusters, the researcher analyzed the AIX data from the previous year and found a consistency across the years among the clusters of state park systems.

Table 2

One-Way ANOVA Source Table for State Parks Descriptors (1): Property (a)

(N=50)

		Sum of Squares	df	Mean Square	F	Sig.
Number of Property	Between Groups	668745.176	6	111457.529	30.890	<.000*
	Within Groups	155155.244	43	3608.261		
	Total	823900.420	49			
Number of Parks	Between Groups	21551.226	6	3591.871	7.245	<.000*
	Within Groups	21316.774	43	495.739		
	Total	42868.000	49			
Number of Recreation Areas	Between Groups	13469.031	6	2244.839	4.409	.001*
	Within Groups	21894.889	43	509.183		
	Total	35363.920	49			
Number of Natural Areas	Between Groups	4292.911	6	715.485	2.349	.047
	Within Groups	13097.269	43	304.588		
	Total	17390.180	49			
Number of Historical Areas	Between Groups	3068.418	6	511.403	3.105	.013
	Within Groups	7081.582	43	164.688		
	Total	10150.000	49			
Number of Environmental Areas	Between Groups	70.980	6	11.830	10.869	<.000*
	Within Groups	46.800	43	1.088		
	Total	117.780	49			

* Significance level at .01 level

Table 3

One-way ANOVA Source Table for State Parks Descriptors (2): Property (b)

(N=50)

		Sum of Squares	df	Mean Square	F	Sig.
Number of Scientific Areas	Between Groups	3833.564	6	638.927	6.650	<.000*
	Within Groups	4131.716	43	96.086		
	Total	7965.280	49			
Number of Forests	Between Groups	222602.983	6	37100.497	169.340	<.000*
	Within Groups	9420.797	43	219.088		
	Total	232023.780	49			
Number of Fish & Wildlife Areas	Between Groups	23103.343	6	3850.557	1.946	.095
	Within Groups	85066.977	43	1978.302		
	Total	108170.320	49			
Total Acreage	Between Groups	3.5E+12	6	5.763E+11	2.323	.050
	Within Groups	1.1E+13	43	2.480E+11		
	Total	1.4E+13	49			
Number of Trails	Between Groups	3391222.303	6	565203.717	13.873	<.000*
	Within Groups	1751936.197	43	40742.702		
	Total	5143158.500	49			
Total miles of Trails	Between Groups	5.0E+0.7	6	8300186.603	4.260	<.002*
	Within Groups	8.4E+07	43	1948326.811		
	Total	1.3E+08	49			

*Significance level at .01 level

Table 4

One-way ANOVA Source Table for State Parks Descriptors (3): Amenities

(N=50)

		Sum of Squares	df	Mean Square	F	Sig.
Number of Cabins	Between Groups	694819.823	6	115803.304	13.158	<.000*
	Within Groups	378432.097	43	8800.746		
	Total	1073251.920	49			
Number of Lodges	Between Groups	430.003	6	71.667	15.220	<.000*
	Within Groups	202.477	43	4.709		
	Total	632.480	49			
Number of Restaurants	Between Groups	1335.004	6	222.501	27.999	<.000*
	Within Groups	341.716	43	7.947		
	Total	1676.720	49			
Number of Golf Courses	Between Groups	626.063	6	104.344	19.684	<.000*
	Within Groups	227.937	43	5.301		
	Total	854.000	49			

*Significance level at .01 level

Table 5

One-way ANOVA Source Table for State Parks Descriptors (4): Visitors

(N=50)

		Sum of Squares	df	Mean Square	F	Sig.
Number of Day Use	Between Groups	8.4E+15	6	1.407E+15	14.832	<.000*
	Within Groups	4.1E+15	43	9.487E+13		
	Total	1.3E+16	49			
Number of Night Use	Between Groups	6.1E+13	6	1.009E+13	11.416	<.000*
	Within Groups	3.8E+13	43	8.835E+11		
	Total	9.9E+13	49			

* Significance level at .01 level

Table 6

One-way ANOVA Source Table for State Parks Descriptors (5): Operation (a)

(N=50)

		Sum of Squares	df	Mean Square	F	Sig.
Total Operation Budget	Between Groups	9.3E+16	6	1.545E+16	61.052	<.000*
	Within Groups	1.1E+16	43	2.531E+14		
	Total	1.0E+17	49			
Total Annual Revenue	Between Groups	7.4E+15	6	1.225E+15	22.929	<.000*
	Within Groups	2.3E+15	43	5.343E+13		
	Total	9.6E+15	49			
Revenue from General Funds	Between Groups	2.0E+16	6	3.397E+15	22.348	<.000*
	Within Groups	6.5E+15	43	1.520E+14		
	Total	2.7E+16	49			
Revenue from Dedicated Funds	Between Groups	4.0E+15	6	6.603E+14	25.673	<.000*
	Within Groups	1.1E+15	43	2.572+13		
	Total	5.1E+15	49			

*Significance level at .01 level

Table 7

One-way ANOVA Source Table for State Parks Descriptors (6): Operation (b)

(N=50)

		Sum of Squares	df	Mean Square	F	Sig.
Total Capital Expenditure	Between Groups	1.0+16	6	1.714+15	11.545	<.000*
	Within Groups	6.4+15	43	1.485+14		
	Total	1.7E+16	49			
Revenue from Entry Fees	Between Groups	56429.177	6	9404.863	13.882	<.000*
	Within Groups	29131.403	43	677.474		
	Total	85560.580	49			
Revenue from Concessions	Between Groups	1.9E+14	6	3.122E+13	18.578	<.000*
	Within Groups	7.2+13	43	1.680E+12		
	Total	2.6E+14	49			
Types of Dedicated Funds	Between Groups	291.629	6	48.605	5.273	<.000*
	Within Groups	396.391	43	9.218		
	Total	688.020	49			

* Significance level at .01 level

Table 8

One-way ANOVA Source Table for State Parks Descriptors (7): Personnel

(N=50)

		Sum of Squares	df	Mean Square	F	Sig.
Full-time Central Office Personnel	Between Groups	76262.720	6	12710.453	35.581	<.000*
	Within Groups	15360.560	43	357.222		
	Total	91623.280	49			
Part-time Central Office Personnel	Between Groups	5614.251	6	935.709	400.478	<.000*
	Within Groups	100.469	43	2.336		
	Total	5714.720	49			
Full-time Field Positions	Between Groups	2020744.951	6	336790.825	6.850	<.000*
	Within Groups	2114289.369	43	49169.520		
	Total	4135034.320	49			
Part-time Field Positions	Between Groups	83650.757	6	13941.793	2.034	.082
	Within Groups	294803.963	43	6855.906		
	Total	378454.720	49			

*Significance level at .01 level

Results of OTRD Internal Survey

The internal questionnaire was distributed to 43 people who were the policy leadership and decision makers in the Oklahoma Tourism and Recreation Department. These participants included the commissioners of the Oklahoma Tourism and Recreation Commission, the executive directors of various divisions within the Okalahoma Tourism and Recreation Department, and the regional managers of Oklahoma State Parks. Thirty-six people participated in the survey, with an overall response rate of 83.7%.

Four questions were asked in the survey. The first question was concerned with participants' suggestions on the scope the benchmarking study. Respondents were asked to state a preference for conducting a system-wide benchmarking study with all eight suggested performance measures included, or for a more in-depth benchmarking study that would include two or three benchmarking performance measures. Twenty respondents (55.6%) expressed preference to a system-wide benchmarking study and 16 respondents (44.4%) preferred a more in-depth benchmarking study with two or three important performance measures (Figure 5)

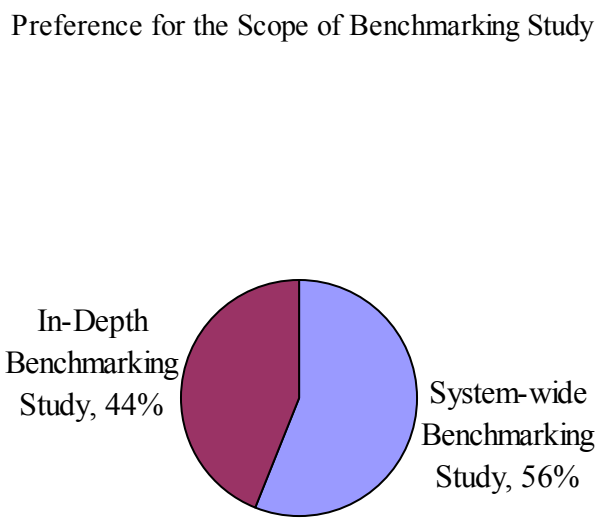


Figure 5

Preference for the Scope of the Benchmarking Study

For respondents who suggested conducting a more in-depth benchmarking study with two or three performance measures, an additional question was posed. Respondents were asked to rank the top three categories of benchmarking measures out of the eight categories of benchmarking measures generated from the Delphi study that should be included in this benchmarking study. The respondents also had an option to suggest a category of performance measure that they believed was important, but did not appear in the eight categories of performance measures from the Delphi study (Table 9).

Table 9

Performance Measures of State Parks

Final Ranking	Weighted Ranking	Number of Responses	Categories of Performance Measures
1	18	10	Financial
2	17	8	Stewardship
3	16	7	Personnel
4	14	7	Planning
5	12	8	Maintenance
6	12	8	Marketing/Public Service
7	3	1	Concessionaire
7	3	1	Constituents
9	2	1	Others (Education/Interpretation)

A weighted ranking was used in the analysis of this question. A weighted ranking is "a function of the overall rankings of all the respondents and the number of respondents' ranking individual items" (Caneday & Jordan, 2003, p.66). Respondents indicated that the top three most important performance measures that should be included in this study were financial factors, stewardship factors and personnel factors if an in-depth benchmarking study with two or three benchmarking measures were to be conducted.

Respondents were also asked to suggest appropriate benchmarking partners. The researcher gave respondents two options: one choice included the state park systems similar to the Okalahoma State Parks and the other choice was the state park

systems dissimilar to the Oklahoma State Parks. Twenty- four participants (66.6%) responded to this question. Seventeen respondents (47.2%) preferred choosing state park systems similar to the Oklahoma State Parks as benchmarking partners while seven respondents (19.4%) indicated a preference to select state park systems dissimilar to the Oklahoma State Parks (Figure 6).

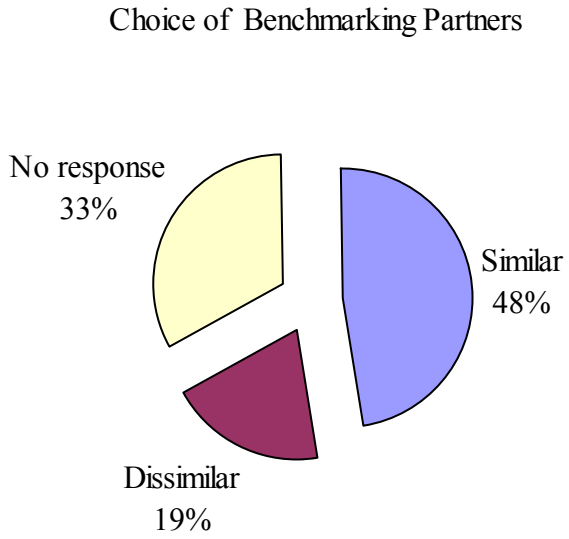


Figure 6

Preference for Benchmarking Partners

Lastly, respondents were asked to name a specific state park system they believed that should be a benchmarking partner for the Oklahoma State Parks and to provide rationale for that preference. Among the 36 participants, 32 responded to this question, with a response rate of 88.9%.

Interestingly, 13 respondents (36.1%) suggested a specific Oklahoma state park instead of a state park system. Some respondents might have misread the question and missed the word “system” in the question. Among the 18 responses by the participants

who suggested a specific state park system, six people indicated a desire to use the Arkansas State Parks as a benchmarking partner. Three people suggested selecting the Missouri State Parks as a benchmarking partner and two people suggested the California State Parks. Other state park systems suggested by respondents included those of Wisconsin, Georgia, Washington, Pennsylvania, Indiana, Florida, and Arizona. One respondent expressed a preference for a similar state park system as a benchmarking partner, but did not give a specific name of a state park system.

Among the rationales provided by the respondents, three major reasons were given as the basis of choosing benchmarking partners. Funding resources and funding methods of other state park systems was one of the major reasons. Almost 40% of respondents (seven respondents) who provided rationales mentioned funding as the reason for choosing benchmarking partners. Similarity to the Oklahoma State Parks was another major factor in choosing benchmarking partners. Four respondents provided such a rationale. The similarities included geographic closeness, history, number and type of facilities, topographic, and social similarities. The similarity rationale was especially evident among those respondents who named neighboring state park systems, such as Arkansas State Parks and Missouri State Parks.

Third, the perceived quality management of a state park system was an important rationale for choosing benchmarking partners. Six respondents provided such a rationale. The quality of management of a state park system referred to stewardship of resources, accessibility, financial resources, and professional management of the park system.

In response to participants' preferences, the researcher decided to conduct a system-wide benchmarking study. Because the responses on the preference for similar benchmarking partners did not reach 50% and there was a significant percentage of

non-responses, the researcher decided to choose benchmarking partners from both similar groups and dissimilar groups.

Final Determination of Benchmarking Measures and Benchmarking Partners

This section answers research question 4: Which state park systems are the appropriate benchmarking partners for Oklahoma State Parks? Based on the K-means cluster analysis and the responses of OTRD internal survey, six state park systems were chosen as the benchmarking partners for the Oklahoma State Parks.

The Oklahoma State Parks belonged to the same group with eight other state park systems, which was the "Well-developed and Well-staffed State Park Systems". Within this group, Georgia State Parks and Indiana State Parks were selected as benchmarking partners based on their similarities to the Oklahoma State Parks. Georgia State Parks and Oklahoma State Parks were similar in property composition and total acreage. Georgia State Parks had 83,808 acres while Oklahoma State Parks had 71,519 acres. Georgia State Parks and Oklahoma State Parks also had the closest number of "state park" designations within the group. Georgia State Park had 55 state parks and Oklahoma State Parks had 50 state parks. Annual visitation to of the Georgia State Parks and the Oklahoma State Parks were very similar. Both park systems received close to 25 million annual visitors. However, compared to the Oklahoma State Parks, Georgia State Parks had a variety of dedicated funds, larger capital improvement funds, larger revenue from concessions, and a larger number of field staff.

Indiana State Parks was another benchmarking partner selected based on its similarity to the Oklahoma State Parks. Indiana State Parks had the closest operating budget to that of the Oklahoma State Parks. Indiana State Parks had an annual operation budget of 44 million dollars while the Oklahoma State Parks had an annual

operating budget of 42 million dollars. Neither of the systems utilized dedicated taxes for their park systems. “State park” designations were the major property in both systems. “State park” designations covered 96% of the total property in the Indiana State Parks and 90% in the Oklahoma State Parks. Compared to the Oklahoma State Parks, Indiana State Parks received more in revenue and capital improvement. They also received more visitors annually.

Four additional state park systems, Arkansas State Parks, North Carolina State Parks, Missouri State Parks, and Colorado State Parks, which were dissimilar to the Oklahoma State Parks, were also chosen as benchmarking partners. These four state park systems were from three distinct clusters. Both Arkansas State Parks and North Carolina State Parks were in the cluster of “Traditional Medium-sized State Park Systems”. Missouri State Parks was in the cluster of “Heavily-used, Large State Park Systems” and Colorado State Parks was in the cluster of “Rural Western State Park Systems”.

Arkansas State Parks, Colorado State Parks and Missouri State Parks were chosen also because of their geographical importance as neighboring state park systems to the Oklahoma State Parks. In addition to geographical closeness, Arkansas State Parks (cluster two) was housed in a similar administrative agency (Department of Parks and Tourism, Arkansas) as the Oklahoma State Parks (Oklahoma Tourism and Recreation Department). The Missouri State Parks (cluster four) had a similar number of “state park” designations and a similar number of visitors as the Oklahoma State Parks. Colorado State Parks (cluster one) had a similar number of “state park” designations as the Oklahoma State Parks. Additionally, the North Carolina State Parks was chosen as a benchmarking partner upon the request of the State Parks Division of the Okalahoma Tourism and Recreation Department. The North Carolina

State Parks had the same number of properties, as did the Oklahoma State Parks. The number of day visits of the two state park systems was very close, too. Both systems received about 13 million day visitors annually.

Benchmarking Survey

Once the benchmarking measures and benchmarking partners were determined, a self-administered questionnaire was designed to solicit detailed information from the six partnering state park systems. The questionnaire consisted of eight categories of questions which included: (1) financial support; (2) concessionaires; (3) marketing and public information; (4) maintenance; (5) planning; (6) public involvement and constituent understanding; (7) staffing and personnel, and (8) stewardship. There were 95 questions in the survey, with seven questions in financial support, 11 questions in concessionaires, 20 questions in concessionaires, nine questions in maintenance, seven questions in planning, 13 questions in public involvement and constituent understanding, 15 questions in staffing and personnel, and 13 questions in stewardship.

The benchmarking survey was sent through both postal mail and electronic mail to the six benchmarking partners. A pre-paid stamped envelope was included in each of the postal mail for the return of the questionnaire if the benchmarking partners chose to use the postal mail. Electronic mail was sent to all benchmarking partners with the questionnaire attached in Microsoft Word format. The benchmarking partners could choose either way to respond.

The questionnaire was revised several times based on the suggestions from the State Parks Divisions of OTRD. Measures that were available from the 2004 Annual Information Exchange (AIX) by the National Association of State Park Directors were not included in the questionnaire. In the presentation of the data analysis in the

following sections, there are three major sections under each category of the factors. The first part is the data analysis that was from the 2004 AIX. The second part is the data analysis of the benchmarking questionnaire. The third section is the summary. These analyses answer research question 5 and research question 6: What is the status of the Oklahoma State Parks in terms of the performance measures used in this benchmarking study? What specific areas were the benchmarking partners better than the Oklahoma State Parks in terms of operation and management?

Two electronic messages were sent to all partners as reminders. The first reminder was sent to respondents two weeks after the questionnaires were mailed and the second reminder was sent four weeks after the questionnaires were mailed. Originally, all selected benchmarking partners agreed to participate in the study. However, Colorado State Parks did not respond to the benchmarking survey. The researcher made an effort to learn about the dropout reason, but was unsuccessful in gaining that information. In one conversation, a representative of Colorado State Parks indicated the system was heavily involved in requesting funds through the Colorado lottery, an important funding source for operations at the time of the study. Therefore, five state park systems, Arkansas State Parks, Georgia State Parks, Indiana State Parks, Missouri State Parks, and North Carolina State Parks were the final benchmarking partners in this study.

Factor 1: Financial Support

AIX Information

The AIX provided information about the state appropriations as budget, revenue earned, operating budget, capital budget, and sources and amount of dedicated revenue. Figure 7 shows a comparison of total operating expenditure and capital expenditure of six state park systems. Georgia State Parks reported the largest

operating expenditure close to 60 million dollars while both Indiana and Oklahoma State Parks had operating budget of over 40 million dollars. The other three state park systems had operating expenditure around 30 million dollars.

The situation of capital expenditure was quite different. Although Oklahoma State Parks had the third largest total operating expenditure, they had the smallest capital expenditure among the six state park systems, which was about $400,000. The capital expenditure of the five benchmarking partners ranged from over seven million dollars to about 16 million dollars. Arkansas State Parks had the largest capital expenditure close to 16 million dollars.

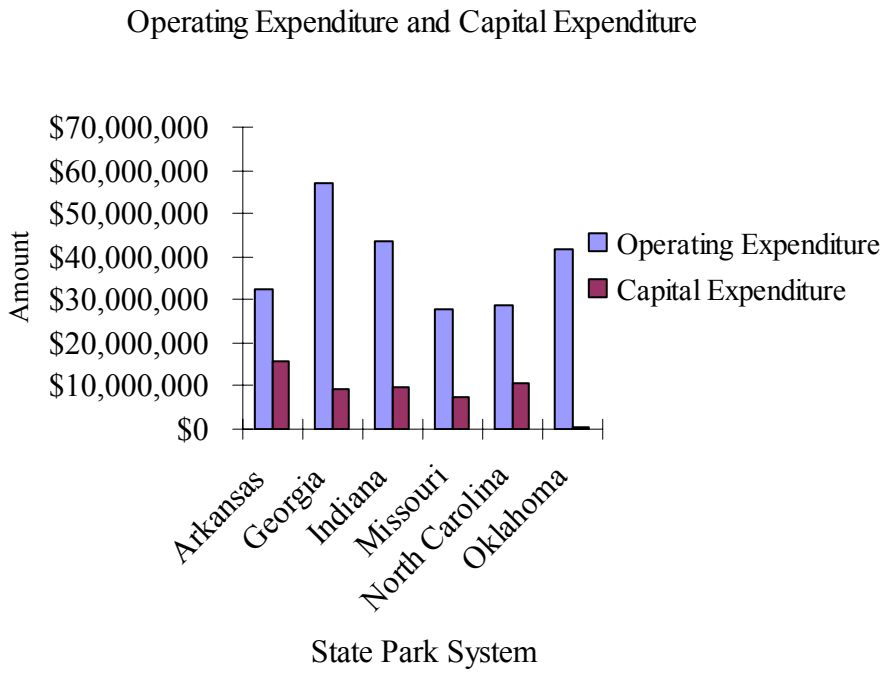


Figure 7

Comparison of Operating Expenditure and Capital Expenditure

The revenue and dedicated funds of the six state park systems are shown in

Figure 8. Indiana State Parks reported the largest revenue, close to 35 millions dollars. Georgia State Parks, whose total acreage area is close to that of Oklahoma State Parks, received annual revenue of over 27 million dollars. Oklahoma received almost 23 million dollars from parks operation. Arkansas State Parks received about 14 million dollars in revenue. The revenue of Missouri State Parks and North Carolina State Parks were much fewer than other state park systems, with about four millions dollars and three million dollars, respectively.

Neither Oklahoma State Parks nor Indiana State Parks utilized dedicated funds. Missouri State Parks utilized exceptionally larger dedicated funds than other five state park systems. Their dedicated funds were over 22 million dollars in total. The other three state park systems-Georgia, Arkansas and North Carolina utilized dedicated funds from two million dollars to almost six million dollars.

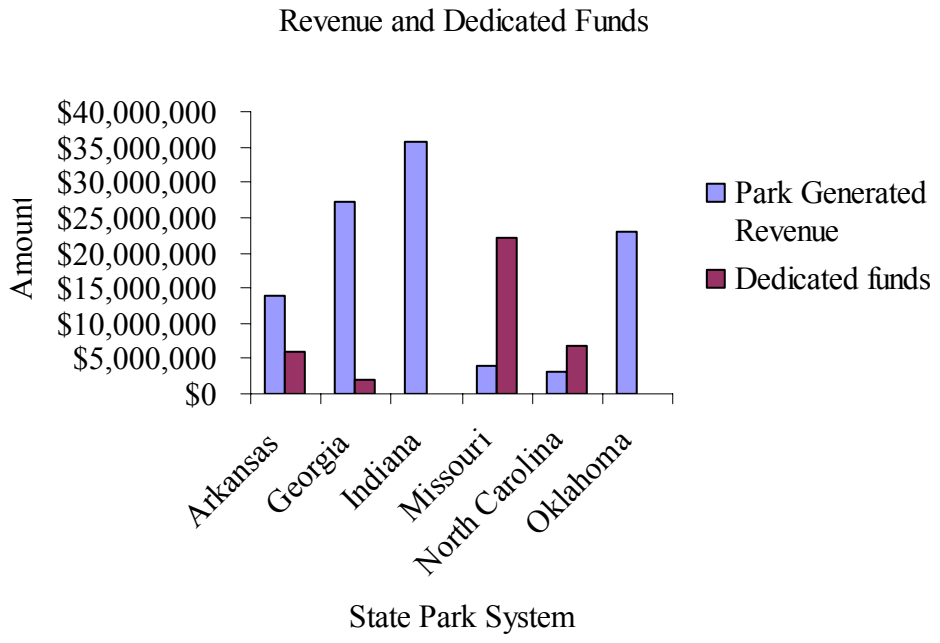


Figure 8

Comparison of Revenue and Dedicated Funds

Figure 9 demonstrates the percentages of state appropriation and park generated revenue in total operating expenditure in each state park system. North Carolina State Parks had the highest percentage of state appropriation in total operating expenditure, which was 63.18% of the total operating expenditure. The percentage of state appropriation in total expenditure was similar in three state park systems, Arkansas (38.05%), Georgia (35.08%) and Oklahoma (39.42%). In Indiana State Parks, the state appropriation was 18.44% of the total operating expenditure. The percentage of state appropriation in operating expenditure in Missouri State Parks was significantly smaller, which was only 1.56% of the total operating expenditure.

The percentage of park-generated revenue in total operating expenditure in Indiana State Parks was the highest among the six state park systems, which was 81.56% of the total operating expenditure. The percentage of revenue in the total operating expenditure was similar in Arkansas State Parks (43.42%), Georgia State Parks (47.38%), and Oklahoma State Parks (54.97%). The percentage of revenue in the total operating expenditure of Missouri State Parks and North Carolina State Parks was much smaller, which was 14.09% and 11.01% respectively.

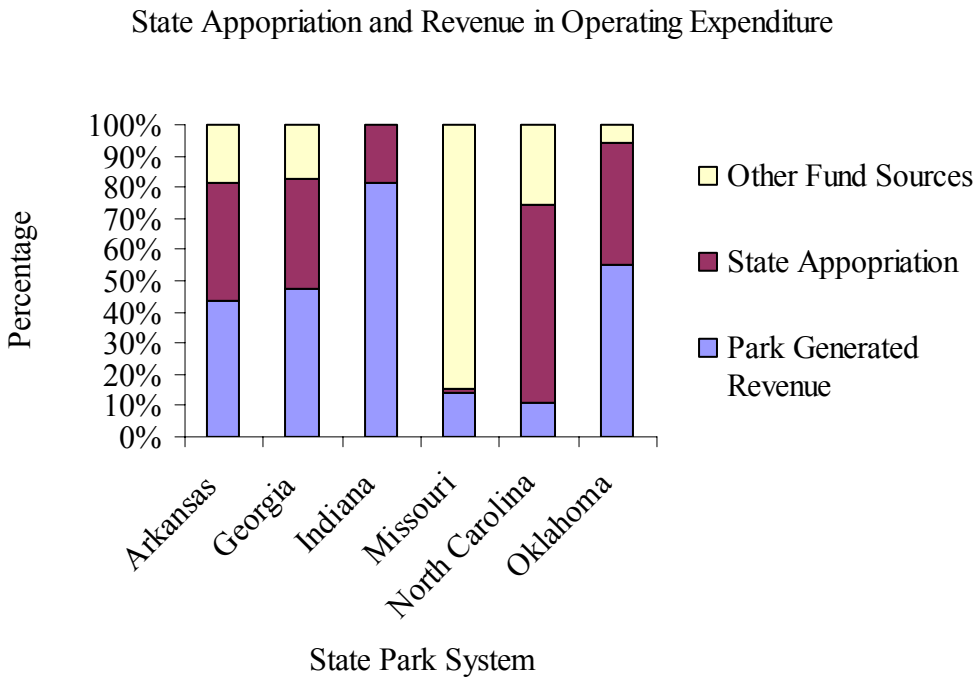


Figure 9

State Appropriation and Revenue in Total Operating Budget

Table 10 displays the ratio of the total number of visitors and the total number of staff in each state park system, which was a reflection on visitation based on staffing. The total number of visitors included day visitors and night visitors. The total number of staff included full-time staff, part-time staff and seasonal staff. The total number of visitors in six state park systems ranged from about 10 million to over 17 million. Missouri State Parks received the largest number of visitors annually. Oklahoma State Parks ranked second in total number of visitors, receiving over 14 million visitors annually. The total staff number in six state park systems ranged from over 700 to almost 2,300. Indiana State Parks had the largest number of staff, while Oklahoma State Parks had the smallest number of staff. Missouri State Parks had the highest ratio of total number of visitors and total number of staff, while Indiana State Parks

had the smallest ratio. On the ratio of total number of visitors and total number of staff, Oklahoma State Parks was more similar to Missouri State Parks and North Carolina State Parks. The other three state park systems were like one another.

Table 10

Ratio of Total Number of Visitors and Total Number of Staff

State Parks System	AR	GA	IN	MO	NC	OK
Ratio (Visitor: Staff)	8002/1	8663/1	6454/1	22027/1	17005/1	19981/1

Benchmarking Survey

There were seven questions in the benchmarking survey on financial support. The first question examined the percentage of the operating budget allocated for personnel. Four state park systems allocated 50% to 60% of their operating budget to personnel and they were Arkansas, Georgia, Missouri and Oklahoma. North Carolina allocated 60% to 70% of their operating budget for personnel, and Indiana used over 70% of its operating budget in personnel (Table 11). Generally, the expenditure for personnel is a major part of operating budget.

Table 11

Percentage of Operating Budget for Personnel

Percentage	AR	GA	IN	MO	NC	OK
50% to 60%	Y	Y		Y		Y
60% to 70%					Y	
More than 70%			Y			

"Y" indicates "Yes"; shaded areas indicate "No"

The second question asked the participating agencies what funding sources were utilized to generate capital funds. The sources of capital funds varied tremendously among different state park systems (Figure 10). Capital funds for Oklahoma State Parks came from the general state appropriations. The other two state park systems that had general state appropriations as part of their capital funds were the Georgia State Parks and the Indiana State Parks. However, the percentages of general appropriations in capital funds in these two park systems were much less than that of Oklahoma State Parks. Fifty-eight percent of Georgia State Parks' capital funds came from the general state appropriations while 49% of Indiana State Parks' capital funds came from the general state appropriations. The sources of capital funds of Arkansas State Parks, Missouri State Parks and North Carolina State Parks were completely different from others. All of the capital funds for the Arkansas State Parks and the Missouri State Parks came from dedicated revenue sources while over 95% of the capital funds in North Carolina State Parks came from a Parks and Recreation Trust Fund, which was the State's portion of the real estate deed transfer tax for

property sold in North Carolina.

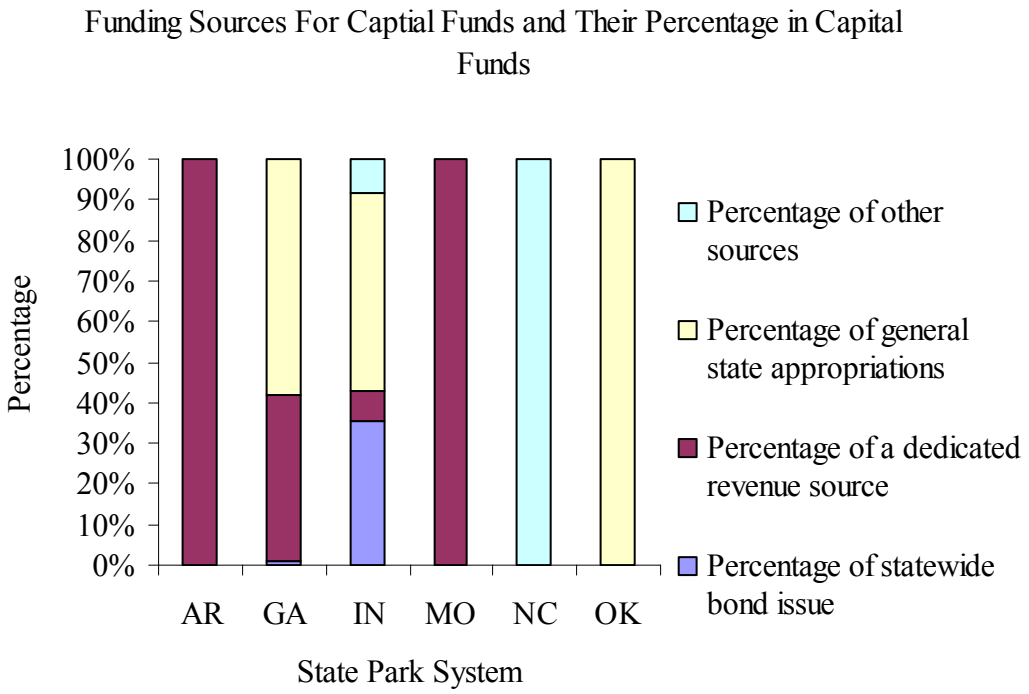


Figure 10

Funding Sources for Capital Funds

Question 3 through 6 in the survey concentrated on the long-range capital plan and the development of the capital plan in state park systems. All participants reported that they had a long-range capital expenditure plans except Indiana State Parks. When participants were asked whether their allocations and expenditures for capital improvement were linked to their capital budget plan, all five benchmarking partners except Indiana State Parks, indicated that their allocations and expenditures for capital improvement were linked to their capital budget plan. In other words, their actual capital expenditures matched reasonably well with their capital plan. Oklahoma State Parks reported that other factors determined the expenditures of the capital

improvement.

The participating agencies also described how their long-range capital plan was developed and how the priorities for expenditures were determined. On the development of the long-range capital plan, both Arkansas State Parks and Georgia State Parks implied that staff members of different level were involved in the development of the long-range capital expenditure plan. Oklahoma State Parks suggested that they developed the capital expenditure plan based on the selection of projects and cost estimation. North Carolina State Parks suggested that the capital plan was a component of the master plan for each of their state parks and the capital plan was updated every five years.

In summary, there were similarities in strategies among the state park systems for determining priorities for capital expenditures. Both Arkansas State Parks and Missouri State Parks suggested that the recommendations of staff members was one the major reasons to prioritize capital expenditures. Three state park systems, Georgia State Parks, North Carolina State Parks and Oklahoma State Parks determined the priorities for capital expenditures according to the current needs for capital expenditures. Both Oklahoma State Parks and North Carolina State Parks used a weighing system to evaluate the needs for the capital expenditures. North Carolina State Parks utilized a comprehensive program called “Project Evaluation Program” (PEP), which consisted of staff members with diverse expertise. Potential capital expenditure projects were evaluated based on 16 objectives and urgencies. Projects were then selected based on the overall scores they received.

The last question in the fist section of “financial support” asked six state park systems how they used their capital expenditure. Each state park system dedicated their capital expenditure with different emphases, which likely reflected the different

needs of six state park systems (Figure 11). Georgia State Parks spent the majority of their capital budget, 90%, in the repair of existing facilities and infrastructure and spent the rest of the capital expenditure on environmental compliance and infrastructure. Indiana State Parks dedicated almost half (46.65%) of their total expenditure in the repair of existing facilities and infrastructure. Their expenditure in environmental compliance and infrastructure and expenditures in new construction and development were close, with 24.87% and 18.17% respectively. The rest of Indiana State Parks capital expenditure was on land lease and acquisitions (8.6%) and ADA compliance (1.62%). Missouri State Parks devoted 42.14% of their capital expenditure to new construction and development. A similar amount of expenditure, 36.64% of the total capital expenditure, was devoted to others aspects of capital improvement. Missouri State Parks spent 16.07% of their capital expenditure in the repair of existing facilities and infrastructure and 5.15% in environmental compliance and infrastructure. North Carolina State Parks used the majority of their capital expenditure in new construction and development, with 65% of the capital expenditure. The other 35% of the capital budget was expended in repair of existing facilities and infrastructure, and environmental compliance and infrastructure, with 25% and 10% respectively.

Oklahoma State Parks used half of their capital expenditure on new construction and development. The other half of their capital expenditure was on environmental compliance and infrastructure, and repair of existing facilities and infrastructure, with 40% and 10% correspondingly. Arkansas State Parks spent similar percentage of capital expenditure in new construction and development, as did Oklahoma State Parks (58%). On the other hand, the Arkansas spent 38% of capital expenditure on repair of existing facilities and 4% on environmental compliance and

infrastructure.

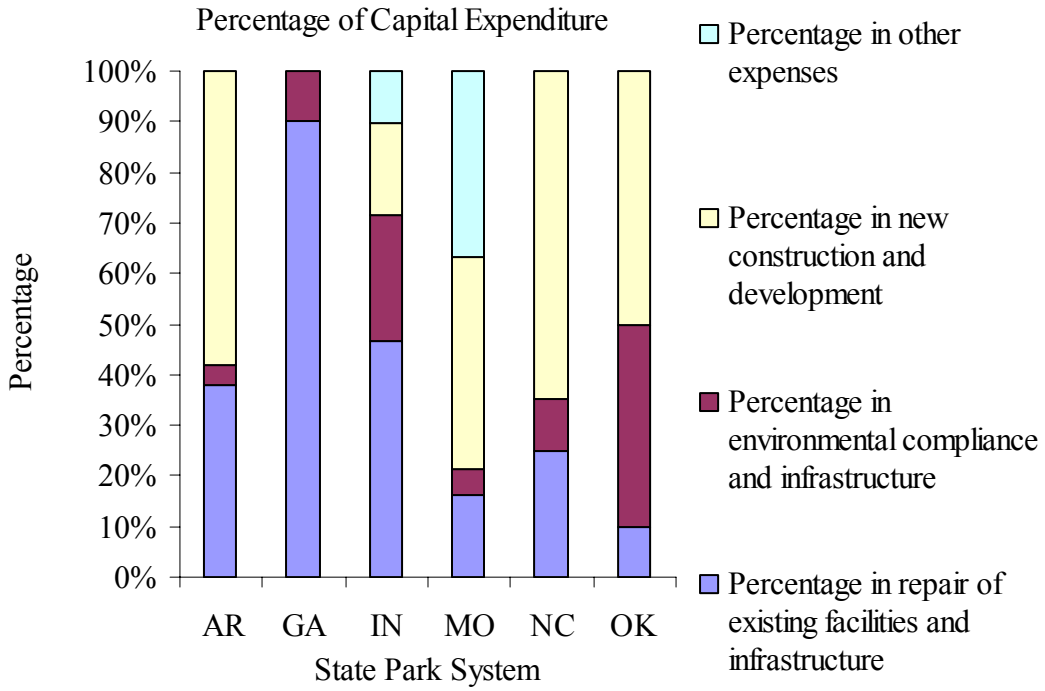


Figure 11

Percentage of Capital Expenditure

Summary

On financial support, six state park systems had the following characteristics. Oklahoma State Parks had a relatively large operating budget, bigger than that of the two neighboring benchmarking partners, Arkansas State Parks and Missouri State Parks. Oklahoma State Parks was far behind its benchmarking partners in terms of capital budget, revenue, and dedicated funds for state parks. Regarding funding sources, Indiana State Parks was the only benchmarking partner that did not have dedicated funds, same as Oklahoma State Parks. However, Indiana State Parks, which was outstanding in revenue among the six state park systems, received a significantly

larger amount of revenue than did Oklahoma State Parks.

On budget allocation for personnel, Oklahoma State Parks was like most of its benchmarking partners, including the two neighboring state park systems. The distribution of capital expenditure varied from state to state. The capital expenditure needs of Oklahoma State Parks were similar to that of the Arkansas State Parks and the North Carolina State Parks in new construction and infrastructure. On the other hand, these two state park systems spent less in environmental compliance and infrastructure and more in repair of existing facilities and infrastructure than did Oklahoma State Parks.

In the development of long-range capital plans, Oklahoma and North Carolina had similar decision systems to prioritize expenditure. The North Carolina State Parks' "Project Evaluation Program", which established concrete objectives evaluated the urgencies of projects with weighting systems and staff input, might be instructive for other state park systems.

Factor 2: Concessionaires

AIX Information

Figure 12 shows the concession revenue of the six state park systems. Oklahoma State Parks ranked third in concessions revenue among the six state park systems. Missouri State Parks received the largest concessions revenue of over 1.5 million dollars. Georgia State Parks received over 1.3 million dollars annually. Oklahoma State Parks received concessions revenue of about $660,000. Both Indiana State Parks and North Carolina State Parks received about half a million dollars from their concessions. The concessions revenue of Arkansas State Parks was significantly less than the other five state park systems, which was slightly over $50,000.

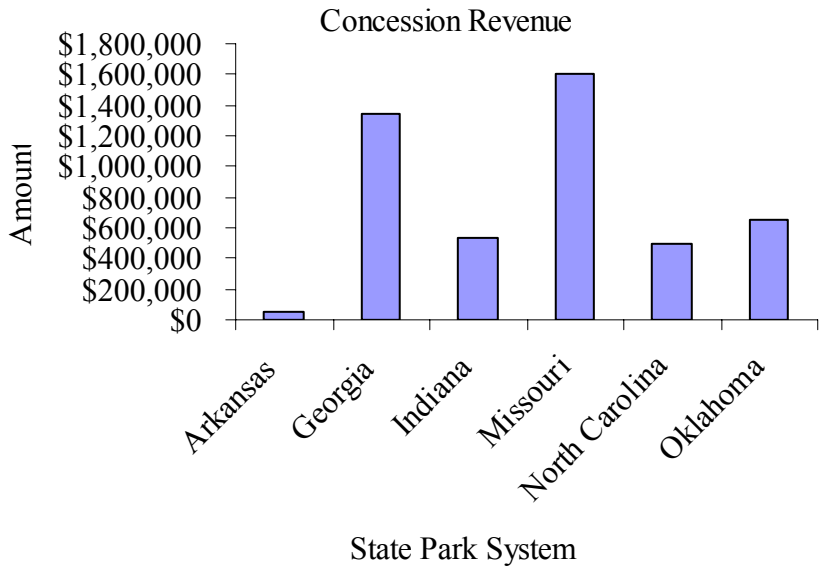


Figure 12

Concession Revenue

Benchmarking Survey

In the benchmarking survey, 11 questions were related to concessionaires. The first question asked the participating agencies whether they used a standard contract for concessionaires. All the participants reported that they used a standard contract for concessionaires. When asked whether they utilized a uniform percentage of gross revenue to be paid as concessionaire fee on the second question, two state park systems, Georgia State Parks and North Carolina State Parks, used a uniform percentage of gross revenue as a concessionaire fee. The other four state park systems did not use a uniform percentage of gross revenue as a concessionaire fee.

The third question asked the participating agencies what the approximate percentage of gross revenue that each state park system used for concessionaires fees.

All five benchmarking partners used a rate of more than 8% of gross revenue paid by concessionaires as a concessionaire fee, which was higher than that of the Oklahoma State Parks. Oklahoma State Parks used a rate of 6% to 8% of gross revenue paid by concessionaires as a concessionaire fee.

Question 4 asked participants if they utilized a competitive bid process in determination of fees paid by concessionaires. Two state park systems, Arkansas State Parks and Georgia State Parks did not utilize a competitive bid process in determination of concessionaire fees. All other four state park systems reported that they used a competitive bid process in determination of concessionaire fees. Georgia State Parks explained that when it came to golf course operations (clubhouse/carts only); they used a RFP (Request for Proposal) and negotiated fees with selected vendors.

Question 5 examined whether the participating agencies had specific performance objectives for the concessionaire contractors. Four state park systems, Arkansas State Parks, Georgia State Parks, Missouri State Parks, and North Carolina State Parks set specific performance objectives for the concessionaire (Table 12).

Table 12

Specific Performance Objectives for Concessionaire Contractors

State park system	AR	GA	IN	MO	NC	OK
Performance objectives	Y	Y		Y	Y	

Y indicates “Yes”; shaded areas indicate “No”

Question 6 and question 7 asked the participating agencies whether they evaluated the quality of services of their concessionaire contractors and how

frequently such evaluations occur. Four benchmarking partners, Arkansas, Georgia, Missouri, and North Carolina evaluated the quality of concession services and these evaluations occurred annually. Indiana State Parks and Oklahoma State Parks did not have such a process.

The participants reported the maximum length of contracts with concessionaire on question eight. The maximum length of contracts with concessionaires varied among different state park systems (Table 13). The longer contracts usually involved a major concessionaire facility. For example, Indiana State Parks indicated that their longest concessionaire contract was 99 years, which was a lodge operation. The other concessionaire contracts in Indiana State Parks were usually three years long.

Table 13

Maximum Length of Concessionaire Contract

Maximum length	AR	GA	IN	MO	NC	OK
5 years	Y	Y				
10 years				Y		
More than 10 years						Y
Others			Y		Y (3 yrs)	

Y indicates “Yes”; shaded areas indicate “No”

When state parks agencies were asked whether they used a feasibility analysis study to determine the utilization of funds required or generated by the concessionaires on question nine, only Georgia State Parks indicated that they used a

feasibility study for their lodge operations.

Question 10 examined the ownership of the concessionaire facilities. Figure 13 demonstrates the concessionaire ownership in different state park systems. The ownership status of concessionaire facilities in Oklahoma State Parks was very similar to that of Arkansas, but was quite different from the rest of benchmarking partners. An overwhelmingly 92% of Oklahoma State Parks' concessionaire facilities were installed and owned by the concessionaires themselves while only 8% of the concessionaire facilities were installed and owned by the state. Similarly, in Arkansas, all concessionaire facilities were installed and owned by the concessionaires, themselves.

In the other four state park systems, the majority of concessionaire facilities were installed and owned by the state. All of the concessionaires' facilities in North Carolina State Parks were installed and owned by the state. Georgia State Parks installed and owned 98% of their concessionaire facilities. Indiana State Parks had 90% of ownership and installation of their concessionaire facilities, while Missouri State Parks owned and installed 80% of their concessionaire facilities.

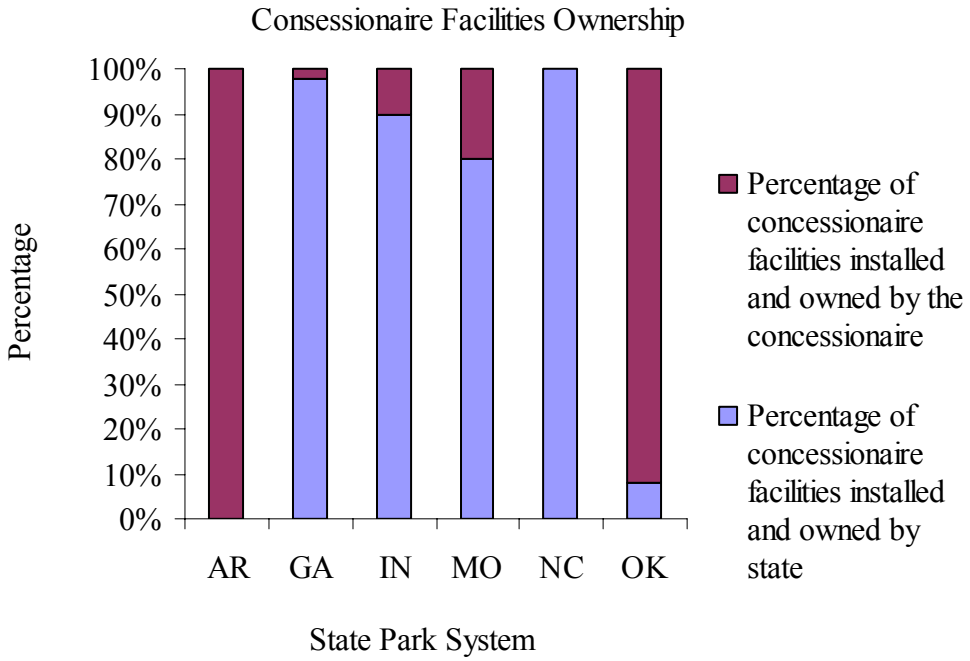


Figure 13

Concessionaire Facilities Ownership

Question 11 examined the types of facilities that were under concession contracts in each state park system. There was a variety of properties under concession among different state park systems. There were four facilities in Arkansas State Parks under concession contracts, which included two horseback riding facilities, one miniature golf and train, and a native wildlife facility. One cabin in Georgia State Parks was under concession. In Indiana State Parks, in addition to one lodge under concession, 70 other types of facilities were under the operation of concessionaires. These included camp stores, snack concessions, saddle barns, and marinas, etc. There were seven lodges, one campground, and five marina areas under concession in Missouri State Parks. In North Carolina State Parks, restaurants, Hang Gliding School, gift shops, and marinas were under concession, although they did not specify the total

number of properties under concession. Three state parks in Oklahoma State Parks were under concessionaire contracts.

Summary

Oklahoma State Parks received more concession revenue than one of the neighboring benchmarking partners, the Arkansas State Parks, but less than the other neighboring benchmarking partner, the Missouri State Parks did. On concessionaire management, the Oklahoma State Parks shared some similarities with its benchmarking partners. For example, Oklahoma State Parks utilized a standard contract for concessionaires, like all benchmarking partners. The ownership of concessionaires in Oklahoma State Parks was similar to one of its neighboring benchmarking partners, Arkansas State Parks, although the specific properties under concession contracts in the two state park systems were different.

On the other hand, there were differences among the Oklahoma State Parks and its benchmarking partners in concessionaire management. Two benchmarking partners, Georgia State Parks and North Carolina State Parks used a uniform percentage of gross revenue to be paid as concessionaire fees while Oklahoma State Parks did not use such a system for concessionaire fee. Moreover, all five benchmarking partners used a higher percentage of gross revenue paid by concessionaires as concession fees than did Oklahoma State Parks.

All benchmarking partners, except Indiana State Parks, established specific performance objectives for concessionaire contracts and conducted evaluation for the quality of service regularly. Oklahoma State Parks did not have such a system to manage the concessionaires. Furthermore, one of the benchmarking partners, Georgia State Parks, utilized feasibility studies for the determination of funds required or generated by concessionaires.

Factor 3: Marketing and Public Information

The researcher examined the websites of six state park systems to discover the services and information available for the public. Table 14 is a summary of the information available at each state park system. North Carolina State Parks had 22 categories of information available on their websites. Both Arkansas State Parks and Georgia State Parks had 21 categories of information available. Missouri State Parks had 19 categories information available on the website. Both Indiana State Parks and Oklahoma State Parks had 16 categories of information available on their websites.

Several types of information were available on websites of all six state park systems. Such information included link to each state park, map of each state park, facility information of each state park, direction, address, and phone number of each state park, program information, email address for public inquiry, and children's programs or school programs. This indicates that all six state park systems provided state park visitors with general information to assist visitors prior to visiting.

On the other hand, certain information was not available on the websites of several state park systems. Accessibility information for people with disabilities was one omission. For example, only four state park systems' websites provided accessibility information about their facilities. Only two state park systems' websites provided toll free phone systems for people with disabilities (TTY/TDD). Two state park systems' websites had strategic plans, annual reports, or performance reports available to the public. One state park system's website had online visitor survey available at the time of the study.

Table 14

Website Contents

Categories of information	AR	GA	IN	MO	NC	OK
General information about park system	Y	Y		Y	Y	
Mission statement		Y	Y	Y	Y	
Link to each state park	Y	Y	Y	Y	Y	Y
Map of each state park	Y	Y	Y	Y	Y	Y
Facility information of each state park	Y	Y	Y	Y	Y	Y
Downloadable brochure of each property	Y		Y		Y	Y
Direction to each state park	Y	Y	Y	Y	Y	Y
Address to each state park	Y	Y	Y	Y	Y	Y
Phone number to each state park	Y	Y	Y	Y	Y	Y
Accessibility information	Y			Y	Y	Y
Email address to each state park	Y	Y			Y	Y
Fees information	Y	Y	Y		Y	
Program information	Y	Y	Y	Y	Y	Y
Online reservation		Y	Y			
Volunteer opportunities		Y	Y	Y	Y	Y
Events calendar	Y	Y	Y		Y	Y
Toll free number for public inquires	Y	Y		Y		Y
Toll free number for people with disabilities	Y			Y		
Email address for public inquiry	Y	Y	Y	Y	Y	Y
Kid's program/school's program	Y	Y	Y	Y	Y	Y
Park news	Y	Y		Y	Y	
Annual report/strategic planning		Y			Y	
Electronic newsletter	Y	Y		Y	Y	Y
Job opportunities	Y		Y		Y	
Staff information	Y	Y		Y	Y	
Online visitor survey				Y		
Total items available	21	21	16	19	22	16

Y indicates “Yes”; shaded areas indicate “No”

AIX Information

The AIX provided information on the number of interpreters/naturalists employed by each state park system. Figure 14 shows this information, with composition of seasonal, part-time, and full-time interpreters/naturalists of each state parks system. The Oklahoma State Parks ranked second to last in the total number of interpreters/naturalists. The majority of interpreters/naturalists in Oklahoma State Parks were full-time. Georgia, Indiana, and Missouri state parks systems were the top three in terms of the total number of interpreters/naturalists, ranging from over 80 to almost 120.

However, the composition of interpreters/naturalists of these three state parks systems varied tremendously. Georgia State Parks employed an almost equal number of full-time interpreters/naturalists and seasonal interpreters/naturalists. The majority of interpreters/naturalists of Indiana State Parks were seasonal, while the majority of interpreters/naturalists of Missouri State Parks were full- time. The total number of interpreters/naturalists in the two state parks systems was similar.

Arkansas State Parks ranked fourth in the number of interpreters/naturalists. They employed almost an equal number of seasonal and full-time interpreters/naturalists too. North Carolina had the fewest number of interpreters, with seven in total. Few of the six state parks systems employed part-time interpreters/naturalists. Missouri State Parks employed 10 part-time interpreters/naturalists and Arkansas State Parks employed only one part-time interpreter/naturalist.

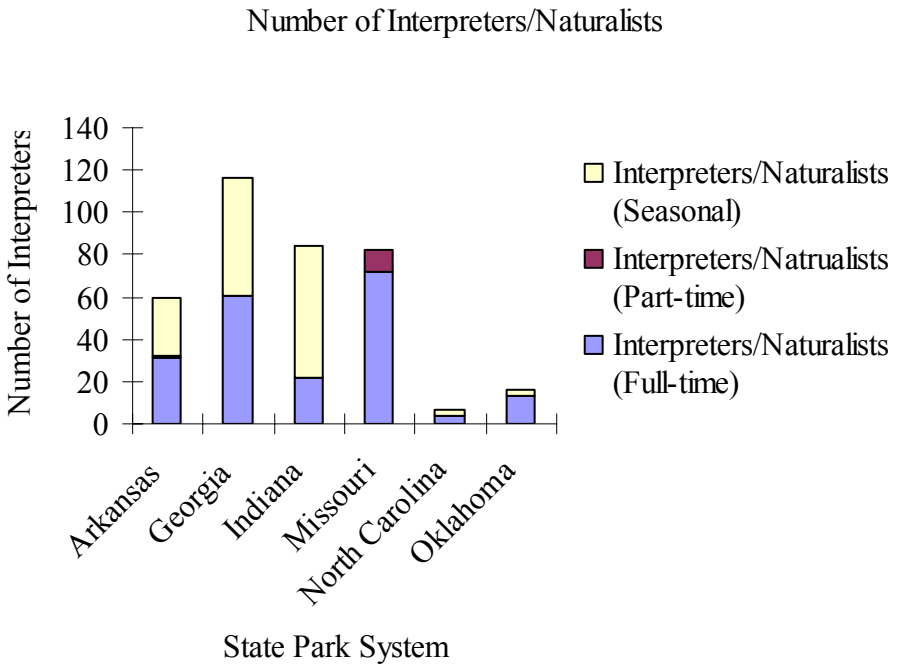


Figure 14

Number of Interpreters/Naturalists

Benchmarking Survey

There were 20 questions in the section of marketing and public information. The first two questions focused on the budget level for marketing state parks in each state park system and the utilization of that budget. Figure 15 displays the annual marketing budget of each state park system. The budgets for marketing state parks varied tremendously among the six state parks systems. Georgia State Parks had the largest amount of marketing budget among the benchmarking participants. Their 1.2 million dollar marketing budget was 2.09% of their total operating budget. Arkansas State Parks' marketing budget was close to one million dollars ($992,429), which was 3.08% of their total operating budget. The Missouri State Parks ranked third in the marketing budget with almost half million dollars ($479,000), which was 1.71% of its

operating budget. The $479,000 marketing budget included $80,000 special events, $100,000 promotions, $ 223,000 brochures, and $76,000 toll-free operation.

The marketing budgets of Indiana State Parks and Oklahoma State Parks were quite similar, with $350,000 (0.80% of operating budget) and $220,000 (0.52% of operating budget) respectively. North Carolina State Parks had the smallest amount of marketing budget, which was $50,000. It was 0.17% of its operating budget.

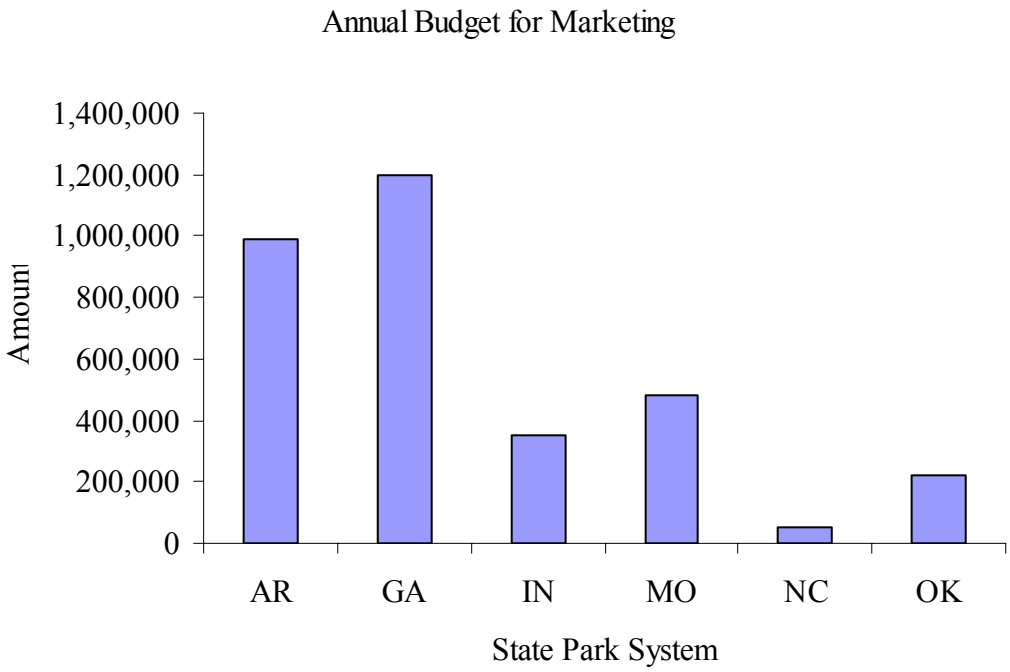


Figure 15

Annual Budget for Marketing

Figure 16 presents the sources of funds for the marketing budget of each state park system. Four state park systems, Arkansas, Missouri, North Carolina, and Oklahoma obtained all of their marketing budgets from state appropriated budget. In Georgia, 65% of the marketing budget came from the state appropriated funds while

25% was derived from concessionaire revenue. Hotel and motel taxes contributed 10% of the total marketing budget for Georgia. In Indiana, 28.6% of the marketing budget was from state appropriated funds. The rest of the marketing budget for Indiana State Parks was from other sources. None of marketing budgets in the six state park systems came from the friends groups or associations.

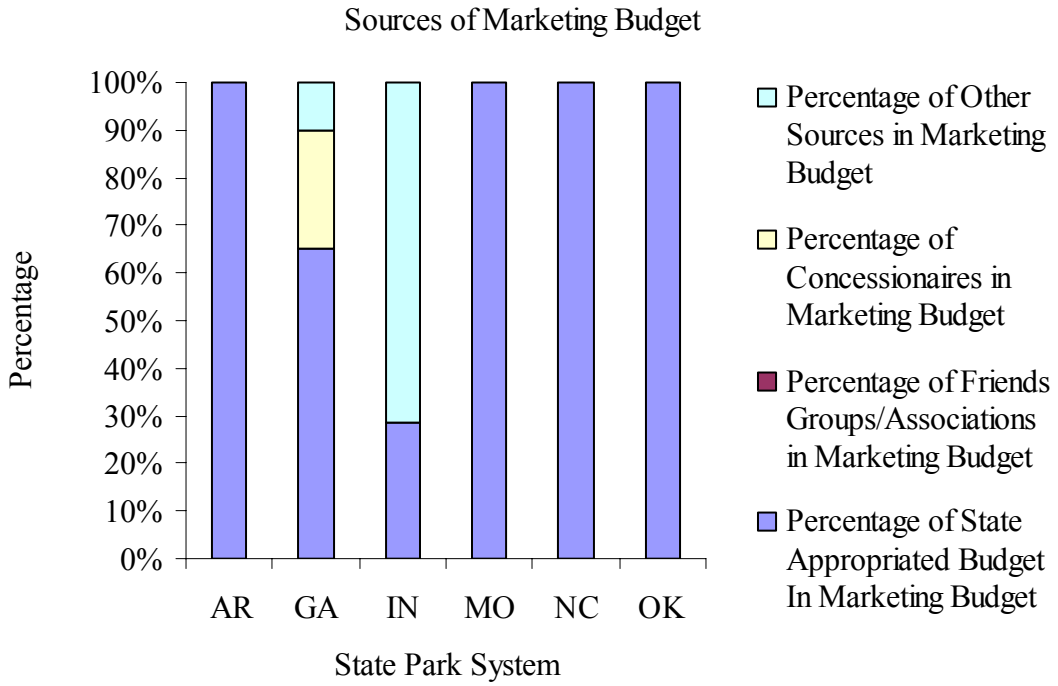


Figure 16

Sources of Marketing Budget

Question 3, 4 and 5 were related to the marketing plan of state parks in each state park system. The questions included the following: whether the participating agencies utilized a marketing plan; the party responsible developing the marketing plan; and how the effectiveness of the marketing plan was evaluated. Arkansas State Parks and Georgia State Parks were the only two state park systems that utilized a

marketing plan. They used in-house staff as well as people from outside to develop the marketing plan. Arkansas State Parks utilized conversion studies, visitor satisfaction studies, and focus groups to evaluate the effectiveness of the marketing plan. Georgia State Parks employed a variety of methods such as visitation, occupancy, use advertising inquiries, published articles, and website statistics to evaluate the effectiveness of the marketing plan.

Question 6 examined what media the state park systems used to market their state parks. Table 15 presents the media that state park systems used. All six state park systems used websites as a marketing method. Furthermore, all but North Carolina State Parks used newspaper, magazine, and radio to market their state parks. North Carolina State Parks mainly used brochures as an additional marketing means. This was reflected in their relatively small marketing budget. Indiana State Parks also used brochures as an additional marketing method.

Moreover, both Georgia State Parks and Indiana State Parks used direct mails and outdoor publications as additional means of marketing. Indiana State Parks employed the most variety of marketing means among six state park systems. Interestingly, few state park systems used television as a marketing method. Arkansas State Parks was the only one that utilized television to market state parks. This may be due to the fact that television is a more expensive marketing means, which is not regarded as the best option for marketing state parks because of the relatively small budgets for marketing in state park systems.

Table 15

Marketing Media

Media	AR	GA	IN	MO	NC	OK
Newspaper	Y	Y	Y	Y		Y
Magazine	Y	Y	Y	Y		Y
TV	Y					
Radio	Y	Y	Y	Y		Y
Websites	Y	Y	Y	Y	Y	Y
Others (Direct mail)		Y	Y			
Others (Outdoor publications)		Y	Y			
Others (Brochures)			Y		Y	

Y indicates "Yes"; shaded areas indicated "No"

The next five questions, question 7 through question 12, examined the opportunities that each state park system provided for public to improve their services. Question 7 and 8 asked participating agencies whether they conducted customer surveys to assess visitor satisfaction and how frequently such surveys occurred. All six state park systems except Indiana State Parks reported that they conducted customer surveys. However, the frequency of these surveys varied among different state park systems. Table 16 demonstrates the differences. Arkansas State Parks and Georgia State Parks conducted customer surveys more frequently and regularly than the other four state park systems.

Table 16

Frequency of Customer Surveys

Media	AR	GA	IN	MO	NC	OK
Annually or more frequently	Y	Y				
Every five years or more frequently, but less than once a year				Y		
Irregularly					Y	Y

Y indicates “Yes”; shaded areas indicate “No”

The next three questions concentrated on the additional opportunities that state park systems provided for public. All six state park systems reported that they provided opportunities for public comment regarding state parks’ services and facilities. Electronic mail was the method that all six state park systems used for communicating with public. With the exception of Indiana, all state park systems also used telephone and postal mail as additional communicating methods. All but North Carolina State Parks also used comment cards for public comments. North Carolina State Parks was the only one that used suggestion box as one of the communication methods for public comments. Table 17 shows the communication methods of six state park systems.

Table 17

Communication Methods for Public Comments

Communication method	AR	GA	IN	MO	NC	OK
E-mail	Y	Y	Y	Y	Y	Y
Telephone	Y	Y		Y	Y	Y
Mailing address	Y	Y		Y	Y	Y
Comment cards	Y	Y	Y	Y		Y
Suggestion box					Y	
Other method						

Y indicates “Yes”; shaded areas indicate “No”

When asked which state park staff members responded to the public comments, all six state park systems reported that the state park directors and state park managers responded to these comments. In addition, Indiana State Parks designated park staff for responding to public comments. Besides designating state park directors, state park managers, and park staff to respond public comments, three state park systems, Arkansas, Georgia and North Carolina also designated a public relations specialist to respond to public comments. Arkansas State Parks also had administrative staff to respond to public comments. Missouri State Parks also had management level staff such as district supervisors, campground reservation specialist, and program directors to respond to public comments (Table 18).

Table 18

Responsible Staff for Public Comments

Responsible staff	AR	GA	IN	MO	NC	OK
The state park director	Y	Y	Y	Y	Y	Y
State park managers	Y	Y	Y	Y	Y	Y
Park staff		Y	Y		Y	
A public relations specialist	Y	Y			Y	
Others	Y			Y		

Y indicates “Yes”; shaded areas indicate “No”

There were six questions, question 12 through question 17, about the reservation system. All six state park systems reported that they provided reservation system for campsites, cabins, shelters or other facilities in state parks. Three state park systems, Arkansas, North Carolina, and Oklahoma used in-house staff to operate the reservation service while the other three state park systems contracted their reservation service to external agencies (Table 19).

Table 19

Reservation Service Provider

Reservation service provider	AR	GA	IN	MO	NC	OK
In-house Staff	Y				Y	Y
Another state department/division						
Contracted or out-sourced		Y	Y	Y		

Y indicates “Yes”; shaded areas indicate “No”

The next question asked the participating agencies about in-advance timeframe that each state park system allowed for reservation. The in-advance timeframe that each state park system allowed for reservation depended on the type of facilities. For campsites, the time ranged from six months to 12 months in advance for reservation. For group camps and lodges, state park systems allowed 11 to 24 months in advance for reservation. For cabins and shelters, state park systems usually allowed 11 to 12 months in advance for reservation. For lodges, the time varied from 12 months to 24 months. Table 20 shows the differences among six state park systems.

Table 20

In-advance Timeframe for Reservation of Facilities

Type of facility	AR	GA	IN	MO	NC	OK
Campsites	12	11	6	6	12	
Group camps	24	11	12		12	12
Cabins	12	11	12		12	12
Lodges (individual/group)	12/24	11	24			12
Shelters	12	11	12		12	12
Others (group facility)		60				

"Month" as the unit in each cell; shaded areas indicate "No"

The participating agencies were asked to provide the major rationale for the decision on the length of time from the reservation to actual use. The participants were provided three choices: "type of facility", "length of stay" and "others". "Type of facility" was the major rationale. All six state park systems except Missouri State Parks indicated that "type of facility" was the major rationale for their administrative decision. "Length of stay" was not the rationale for deciding the advanced time for reservation in most state park systems. Only North Carolina State Parks stated that length of study was the rationale for determination on the in-advance timeframe for reservation of facilities.

Additionally, four state park systems reported additional reasons for the decision on the in-advance timeframe for reservation. Arkansas State Parks explained

that the number of visitors was a factor. Groups usually were allowed a longer in-advance time for reservation in Arkansas. Georgia State Parks reported that providing equal access was one of the major reasons to determine the in-advance time for reservation. Indiana State Parks stated that the capacity of their calling center for handling multiple holiday reservation dates was the reason to decide the in-advance time for reservation. For Missouri State Parks, giving traveling campers adequate time to plan their trips was also the reason for the decision on the in-advance time allowed for reservation.

As for the reservation medium, all six state park systems provided telephone as one of the communication mediums for public access to make reservation. Four state park systems, Arkansas, Georgia, Indiana, and Missouri also provided online reservation service instead of postal mail. The other two state park systems, North Carolina State Parks and Oklahoma State Parks, utilized postal mail as additional reservation means for the public. Moreover, Georgia State Parks also accept walk-ins at parks by visitors. Table 21 displays the details the reservation mediums in six state park systems.

Table 21

Reservation Medium

Reservation method	AR	GA	IN	MO	NC	OK
Electronic-online	Y	Y	Y	Y		
Telephone	Y	Y	Y	Y	Y	Y
Mail	Y				Y	Y
Others		Y				

Y indicates “Yes”; shaded areas indicate “No”

The last four questions in this section concentrated on the interpretive programs of the six state park systems. All state park systems had interpretive or educational programs for visitors. The common programmatic themes in the educational or interpretive programs of the six state park systems were: (1) natural history (wildlife, botany, bird watching, etc,); (2) park use (proper use of environment); (3) environmental education (structured curricula such as WET, WILD, PLT), and (4) outdoor skills. All five benchmarking partners also provided interpretive programs related to cultural history (the role of humans in the areas). Besides, three state park systems, Indiana, Missouri, and North Carolina also had programs about park operations (politics, funding, and mission of state parks). Georgia State Parks provided additional recreational programs and Indiana State Parks provided resource restoration and management programs (Table 22).

Table 22

Programmatic Themes of Interpretive Programs

Interpretive program theme	AR	GA	IN	MO	NC	OK
Natural history	Y	Y	Y	Y	Y	Y
Cultural history	Y	Y	Y	Y	Y	
Park use	Y	Y	Y	Y	Y	Y
Park operations	Y		Y	Y	Y	
Environmental education	Y	Y	Y	Y	Y	Y
Outdoor skills	Y	Y	Y	Y	Y	Y
Other		Y	Y			

Y indicates “Yes”; shaded areas indicate “No”

Figure 17 presented the number of properties with interpretive programming and staff in each state park system. Indiana State Parks and North Carolina State Parks had the highest percentage of properties with interpretive programs and staff. All the operating properties (100.00%) in Indiana State Parks were provided interpretive programs and staff. There were 36 operating properties in North Carolina State Parks, and 35 (97.22%) properties were equipped with interpretive programs and staff. The percentage of properties with interpretive programs and staff was similar among Arkansas State Parks, Georgia State Parks, and Missouri State Parks, which was 52.00%, 52.38%, and 57.50% respectively. Oklahoma State Parks had the smallest percentage of properties with interpretive programs. Among their 50 properties, only

11 (22.00%) properties had interpretive programs and staff.

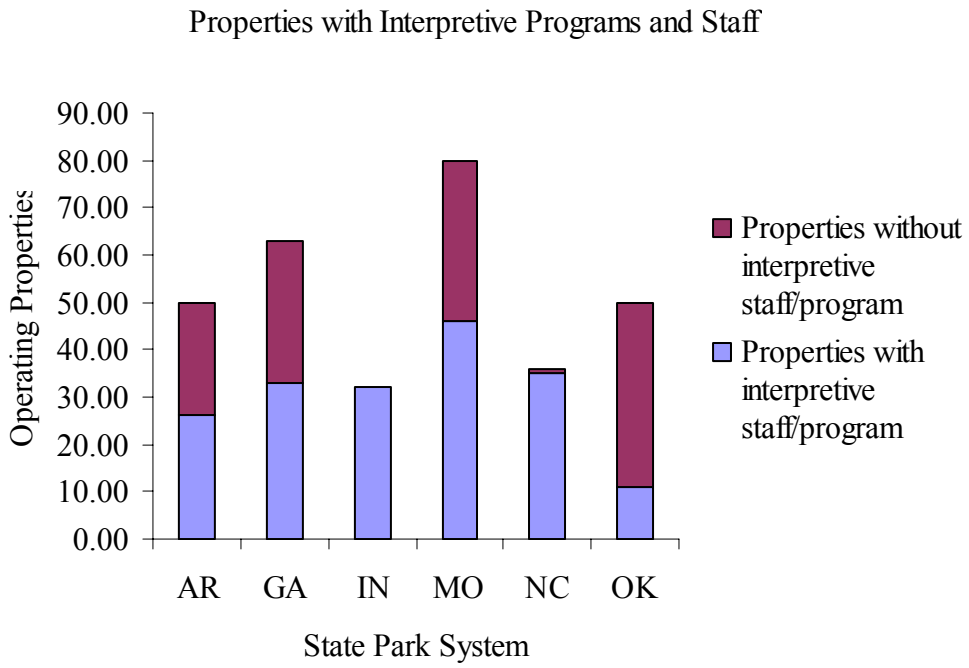


Figure 17

Properties with Interpretive Staff and Programming

Four state park systems reported the percentage of budget designated to interpretive programs and staff. Arkansas and North Carolina dedicated 5% and 5.9% of their total budget to interpretive staff and programming. Indiana spent 7.5% their total budget on interpretive programming. Missouri designated the largest percentage (10%) of the budget to interpretive programming and staff.

Summary

In marketing and public information of state park systems, there were gaps between Oklahoma State Parks and its benchmarking partners. Regarding funding sources of the marketing budget, Oklahoma State Parks was similar to Arkansas State

Parks, Missouri State Parks, and North Carolina State Parks. Although Oklahoma State Parks used similar marketing media as its benchmarking partners, the marketing budget of Oklahoma State Parks was much lower than most of its benchmarking partners. Oklahoma State Parks' marketing budget was small. Georgia State Parks and Arkansas State Parks had the largest amount of marketing budget and they were the only two state park systems that maintained a marketing plan.

Regarding providing opportunities for public comment and input, Oklahoma State Parks conducted customer surveys less frequently than most of its benchmarking partners. Arkansas State Parks and Georgia State Parks conducted customer surveys regularly. The methods that Oklahoma State Parks utilized to communicate with public were similar to that of its benchmarking partners. All benchmarking partners designated additional staff members to respond to public comments than did Oklahoma State Parks.

The reservation system Oklahoma State Parks used was similar to that of the Arkansas State Parks and North Carolina State Parks, which was operated by in-house staff. All benchmarking partners except North Carolina State Parks provided on-line reservation service to visitors, which was not available in Oklahoma State Parks.

On interpretive programs, Oklahoma State Parks had the smallest number of interpreters/naturalists, far less than its five benchmarking partners. Georgia State Parks, Missouri State Parks and Indiana State Parks had the largest number of interpreters/naturalists. Oklahoma State Parks also had the lowest percentage of properties equipped with interpretive programs or staff. Indiana State Parks and North Carolina State Parks had the highest percentage of properties with interpretive programs and staff. All benchmarking partners had a greater variety of interpretive programs than did Oklahoma State Parks.

Factor 4: Maintenance

AIX Information

The total acreage of six state park system is illustrated in Figure 18. The total acreage of three state park systems, Indiana (179, 181), North Carolina (171, 409), and Missouri (139, 731) was quite similar. The total acreage of Oklahoma State Parks was close to that of Georgia State Parks and Arkansas State Parks. The total acreage of Okalahoma State Parks was 71,579 acres, slightly less than Georgia State Parks (83,808), and more than Arkansas State Parks (52,248).

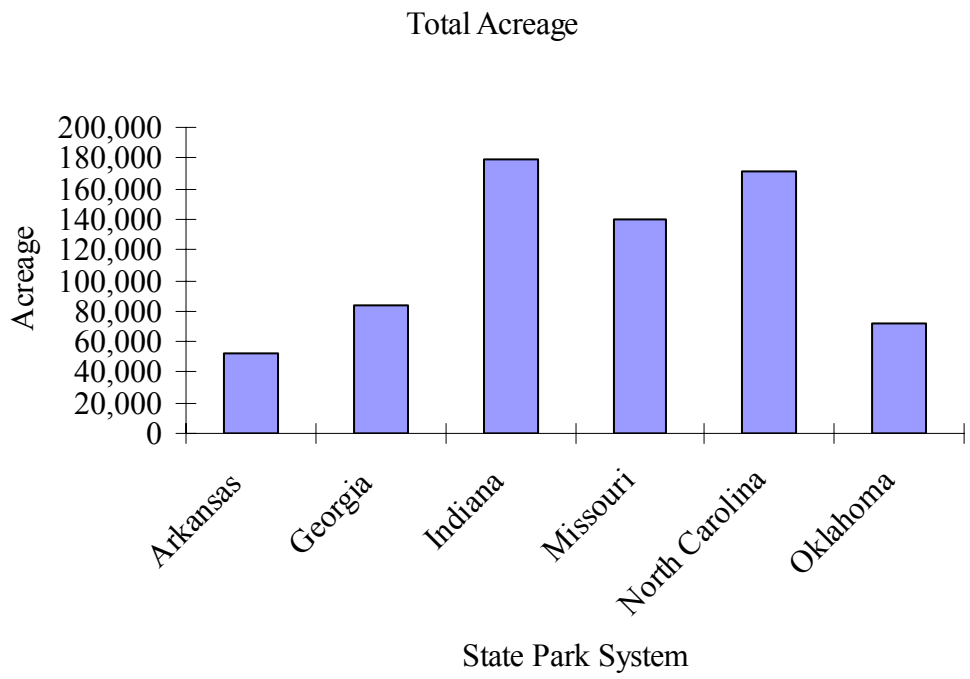


Figure 18

Total Acreage of Properties

Benchmarking Survey

In the benchmarking survey, there were nine questions about maintenance. The first two questions asked the participating agencies whether they kept a maintenance plan for each property and the percentage of properties with maintenance plans. Among six state park systems, Arkansas State Parks and Georgia State Parks kept a maintenance plan for each property. All the other four state park systems had less than 50% of the properties with a specific maintenance plan (Table 23). In Arkansas State Parks, each park developed specific maintenance needs annually. They also had a funded maintenance program, which was 1.6 million dollars annually, and an asset management program, consisting of a "Real Property Inventory" and audition assessment component to direct the maintenance projects.

Table 23

Properties with Maintenance Plans

Maintenance plan	AR	GA	IN	MO	NC	OK
Every property (100%)	Y	Y				
Less than 50% of the total property			Y	Y	Y	Y

Y indicates "Yes"; shaded areas indicated "No"

The next two questions concentrated on the tracking systems for maintenance projects in each state park system. Four state park systems, Arkansas, Georgia, Missouri, and North Carolina established a tracking system maintenance projects. Georgia State Parks and Missouri State Parks kept electronic records accessible to

park managers. Arkansas State Parks and North Carolina State Parks kept paper records in addition to electronic records (Table 24).

Table 24

Maintenance Tracking System

Maintenance tracking	AR	GA	IN	MO	NC	OK
Electronic tracking system	Y	Y		Y	Y	
Paper tracking system	Y				Y	

Y indicates "Yes"; shaded areas indicated "No"

Questions 5 and 6 focused on the backlogs of maintenance projects within six state park systems. Figure 19 shows the dollar value of the backlog of maintenance projects. Georgia State Parks and Arkansas State Parks had the fewest backlogs of maintenance projects, with six million dollars and 10 million dollars respectively. Three state park systems, Indiana, North Carolina, and Oklahoma had substantially larger backlogs in maintenance projects. Both Indiana State Parks and North Carolina State parks had about 100 million dollars in backlogs, while the Oklahoma State parks had 75 million dollars in value in their backlogs of maintenance projects.

The benchmarking partners reported the number of years of accumulated backlog of maintenance projects on the books, which ranged from three years to 20 years. Arkansas State Parks had the fewest accumulated backlog of maintenance, which was about three years. Both Georgia State Parks and Missouri State Parks had five years of accumulated backlogs. North Carolina State Parks had 15 years of backlogs and Indiana State Parks had 20 years of backlogs.

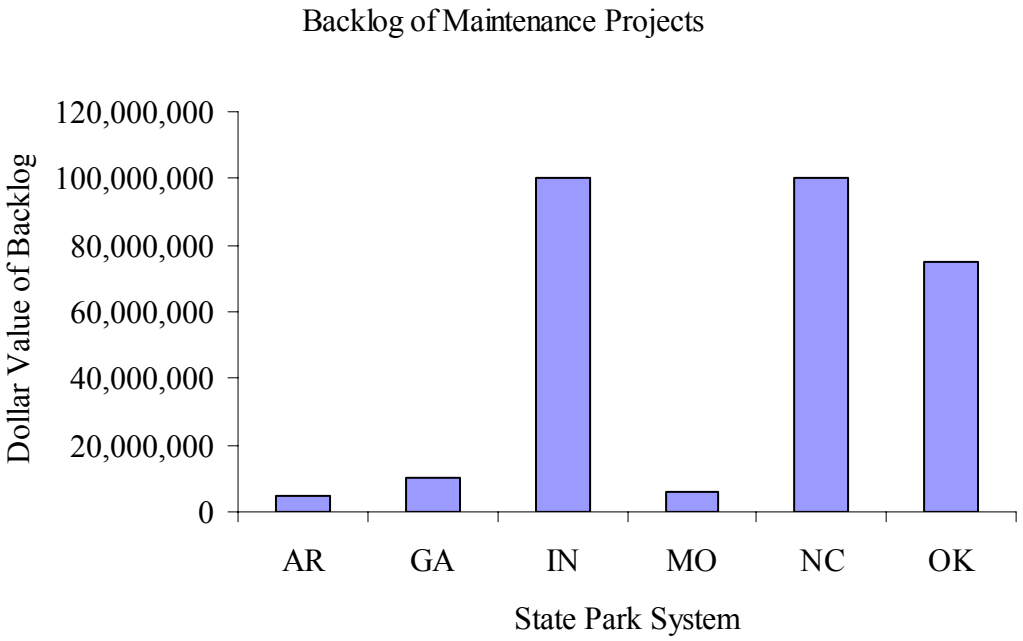


Figure 19

Backlogs of Maintenance Projects

When the participating agencies were asked whether they used national or industry standards, such as the National Recreation and Park Association's (NRPA) "park maintenance standards", for maintenance practices, only two state park systems, Arkansas and Missouri applied such standards (Table 25),

Table 25

National Standard Application in Maintenance Practices

State park system	AR	GA	IN	MO	NC	OK
Application of National Standard	Y			Y		

Y indicates "Yes"; shaded areas indicate "No"

All six state park systems reported that their funding for general maintenance came from general appropriations. Only North Carolina State Parks used capital funding for their general maintenance. None of the state park systems had endowed funds as their funding source for general maintenance. Three state park systems stated that they had dedicated funding sources for maintenance. Arkansas State Parks used conservation tax as an additional source for maintenance funding. Indiana State Parks' maintenance funding was from the state's cigarettes tax fund, while Missouri State Parks' additional funding came from the State Park Earnings Fund and the Park & Soil Tax Fund (Table 26).

Table 26

Maintenance Funding Source

Funding source	AR	GA	IN	MO	NC	OK
General appropriations	Y	Y	Y	Y	Y	Y
Capital funding					Y	
Endowed funds						
Others	Y		Y	Y		

Y indicates "Yes"; shaded areas indicate "No"

The last question in the maintenance section asked the participating agencies about the specific work typically included in the maintenance program other than capital request. All benchmarking partners reported on this question (Table 27). The common maintenance work included fencing, trail work, painting, and sign work.

Three state park systems, Georgia, Missouri, and North Carolina included ground maintenance, such as mowing, weed cutting and removal, and weed spraying as a part of their maintenance program. In addition, Arkansas State Parks and North Carolina State Parks included daily cleaning of restrooms, and trash pick-up as a part of the maintenance program. Missouri State Parks included roofing, cleaning gutters, tree trimming as part of the maintenance program. Although Oklahoma did not indicate the components of their maintenance program, these tasks were included in their work plan.

Table 27

Components of Maintenance Programs

Maintenance program	AR	GA	IN	MO	NC	OK
Daily cleaning of restrooms	Y				Y	
Trash pick-up	Y				Y	
Fencing	Y	Y	Y	Y	Y	
Trail work	Y	Y	Y	Y	Y	
Painting	Y	Y	Y	Y	Y	
Sign work	Y	Y	Y	Y	Y	
Ground maintenance	Y	Y		Y	Y	
Others	Y		Y	Y	Y	

Y indicates “Yes”; shaded areas indicate “No”; blank areas indicate “missing”

Summary

Only two state park systems had a maintenance plan for each property. All benchmarking partners, except Indiana State Parks, used a tracking system for maintenance projects. Oklahoma State Parks did not have a tracking system for maintenance projects. Oklahoma State Parks kept a relatively large amount of backlogs in maintenance projects in dollar value, especially compared to Arkansas State Parks and Missouri State Parks. These two neighboring benchmarking partners applied the national or industry standards as the basis for maintenance practices, while Oklahoma State Parks did not use such standards. Georgia State Parks was only benchmarking partner that utilized the same funding source for maintenance, as did Oklahoma State Parks. All the other four benchmarking partners utilized additional sources for maintenance.

Factor 5: Planning

Benchmarking Survey

Seven questions in the benchmarking survey related to the planning aspect of state park systems. Other than Oklahoma State Parks, all five benchmarking partners maintained a master plan. Indiana State Parks, Missouri State Parks and North Carolina State Parks developed their master plans with in-house staff. Arkansas State Parks and Georgia State Parks indicated that they used a combination of in-house staff and people from the outside to develop their master plan (Table 28).

Table 28

Responsible Party for Master Plan Development

Master plan	AR	GA	IN	MO	NC	OK
In-house staff	Y	Y	Y	Y	Y	N/A
Another department within the state						N/A
Contracted or out-sourced	Y	Y				N/A

Y indicates “Yes”; shaded areas indicate “No”; N/A indicates “Not applicable”

The third question asked whether the participating agencies included an opportunity for public input and comment in the development of master plan. All five benchmarking partners suggested that that they incorporated public input and comments into their master plans (Table 29). Missouri State Parks indicated that although there was not a formal process of involving public in the development of the master plan, the individual plans of each park provided opportunity for public comment. They also provided opportunities for public comment for the land acquisition plan. Additionally, they solicited public input in each facility through its conceptual development planning process, a component of “GMP” (General Management Plan).

Table 29

Public Input in Master Plan

State park system	AR	GA	IN	MO	NC	OK
Public input in master plan	Y	Y	Y	Y	Y	N/A

Y indicates “Yes”; N/A indicates “Not applicable”

The fourth questions related to the components of the master plan of each state park system. The following components were included in the master plan utilized by benchmarking partners: (1) capital improvement plan; (2) comprehensive land acquisition plan; (3) development plan for each property, and (4) resource management plan. Table 30 demonstrates the details. Missouri State Parks included all the major components suggested in the list in their master plan. They further explained that business plan for each property, comprehensive land acquisition plan, development plan each property, and resource management plan were site specific, while capital improvement plan, marketing plan, risk management plan, staff/employee development plan were addressed in individual plans but only generally addressed.

North Carolina State Parks had all suggested components except a business plan in the master plan. Georgia State Parks had all suggested components but a risk management in the master plan. Additionally, Indiana State Parks had interpretation plan and North Carolina State Parks included both interpretation plan and recreation trend/demand analysis in the master plan.

Table 30

Components of Master Plan

Components of master plan	AR	GA	IN	MO	NC	OK
Business plan for each property		Y		Y		N/A
Capital improvement plan	Y	Y	Y	Y	Y	N/A
Comprehensive land acquisition plan	Y	Y	Y	Y	Y	N/A
Development plan for each property	Y	Y	Y	Y	Y	N/A
Marketing plan		Y		Y	Y	N/A
Resource management plan		Y	Y	Y	Y	N/A
Risk management plan				Y	Y	N/A
Staff/employee development plan		Y		Y	Y	N/A
Others (Interpretation plan)			Y		Y	N/A
Others (Trend/demand analysis)					Y	N/A

Y indicates “Yes”; shaded areas indicate “No”; N/A indicates “Not applicable”

As for the frequency of updating master plan, only Arkansas State Parks and North Carolina State Parks specified that they updated their master plan every five years. The other three state park systems indicated that the time intervals of updating the master plan varied. All five state park systems reported that they had actions plans for the implementation of the master plan (Table 31). All benchmarking partners

utilized standardized facility designs, signage guidelines, or appearance regulations that apply to all park facilities in the system. Oklahoma State Parks did not utilize such standards.

Table 31

Update Frequency of Master Plan

Frequency	AR	GA	IN	MO	NC	OK
Annually						N/A
Every five years	Y				Y	N/A
Others		3-5	Y	1-10		N/A

Y indicates "Yes"; shaded area indicated "No"; N/A indicates "Not applicable"

Summary

All five benchmarking partners maintained a master plan, while Oklahoma State Parks did not have a master plan. All benchmarking partners incorporated public input and comments into the master planning process. Georgia State Parks, Missouri State Parks and North Carolina State Parks maintained more comprehensive master plans than others did. Arkansas State Parks and North Carolina State Parks updated their master plan regularly.

Factor 6: Public Involvement and Constituent Understanding

AIX Information

Figure 20 displays the number of day visitors and overnight visitors that six state park systems received annually. Generally, the number of day visitors that the six

state park systems received was similar. Missouri State Parks received the largest number of day visitors (15,888,576). Oklahoma State Parks (12,972,711) was the second and North Carolina State Parks (12,822,808) was the third in visitations. The number of day visitors in the remaining three state park systems, Indiana (12,058,860), Georgia (11,288,760), and Arkansas (9,423,604) was similar. The number of overnight visitor was significantly fewer than the number of day visitors. Indiana State Parks reported the largest number of overnight visitors (2,739,518). The number of overnight visitors in Oklahoma State Parks (1,273,871), Missouri State Parks (1,126,968), and Georgia State Parks (1,116,471) was similar. The remaining two state park systems, North Carolina and Arkansas received annual overnight visitations of 390,046 and 546,556, respectively.

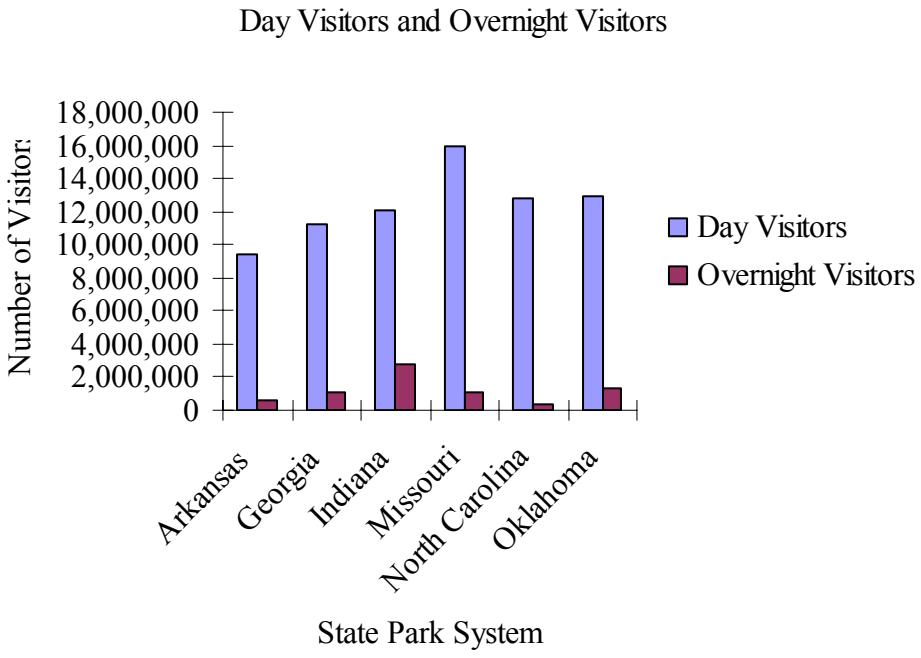


Figure 20

Number of Day Visitors and Overnight Visitors

Benchmarking Survey

In the benchmarking survey, 13 questions related to public involvement and constituent understanding. The first three questions centered on the volunteer groups utilized by the state park systems. All six state park systems stated that they utilized "friends" groups or non-profit associations as partners and advocates for their properties. As for management practices that the volunteer groups provided for state parks, all six state park systems reported that their volunteer groups provided the following services: volunteer staffing, clean-up days (litter pick-up, mowing, road-side and campsite clean-up), and campground hosting. Table 32 illustrates the management assistance that six state park systems provided. Three state park systems, Arkansas, Indiana, and North Carolina utilized volunteer groups to assist a greater variety of management practices than others. In addition, Arkansas State Parks also utilized volunteers to provide assistance in research, interpretation, maintenance, and fund raising programs.

Table 32

Management Assistances by Volunteer Groups

Management assistance	AR	GA	IN	MO	NC	OK
Adopt-a-park program	Y				Y	
Volunteer staffing	Y	Y	Y	Y	Y	Y
Clean-up days	Y	Y	Y	Y	Y	Y
Campground hosts	Y	Y	Y	Y	Y	Y
Gift shop operation			Y	Y		
Program delivery	Y		Y		Y	Y
Other	Y					

Y indicates “Yes”; shaded areas indicate “No”

The third question asked the participating agencies whether they provided training or orientation for volunteers. Four state park systems, Arkansas, Indiana, Missouri, and North Carolina provided volunteer training programs (Table 33).

Table 33

Volunteer Training

State park system	AR	GA	IN	MO	NC	OK
Training on volunteers	Y		Y	Y	Y	

Y indicates "Yes"; shaded areas indicate "No"

Questions 4 through 9 concentrated on the services provided to the under-serviced populations and people with disabilities by state park systems. Question 4 asked participating agencies if they had a process by which under-served populations were provided a voice in management decisions. Three state park systems, Arkansas, Missouri, and North Carolina had a process for under-served populations to voice their opinions in management decisions (Table 34).

Table 34

Inclusion of Under-served Populations in Management Decisions

State park system	AR	GA	IN	MO	NC	OK
Input from under-served population	Y			Y	Y	

Y indicates "Yes"; shaded areas indicate "No"

Four state park systems, Arkansas, Indiana, Missouri, and North Carolina designated professional staff members to review the accessibility of properties and services for people with disabilities. Both Indiana State Parks and Missouri State Parks reviewed the accessibility of properties and services for people with disabilities

as routine maintenance practices (weekly or monthly). Arkansas State Parks reviewed the accessibility annually, while North Carolina State Parks did such reviews every five years. Table 35 demonstrates the differences among six state park systems.

Table 35

Review of Accessibility by Professional Staff

Frequency	AR	GA	IN	MO	NC	OK
Routine practice			Y	Y		
Annually	Y					
Every five years					Y	

Y indicates “Yes”; shaded areas indicate “No”

Two state park systems reported the percentage of the state park properties that complied with the ADA (Americans with Disabilities Act) standards. Missouri State Parks reported that 100% of their properties that were ADA compliant. North Carolina State Parks reported that 75% of their properties were ADA compliant. Other state park systems reported that although they provided facilities accessible to people with disabilities, not all of the facilities were ADA compliant.

Two state park systems, North Carolina and Oklahoma, indicated that their websites were accessible to people with disabilities. Four state park systems, Arkansas, Indiana, Missouri, and North Carolina provided telephone systems that accommodated persons with disabilities (Table 36).

Table 36

Service for People with Disabilities

Service	AR	GA	IN	MO	NC	OK
Website					Y	Y
Telephone system	Y		Y	Y	Y	

Y indicates “Yes”; shaded areas indicate “No”

The last four questions related to the support that state park systems gained from citizens and advocacy groups. Three state park systems, Indiana, Missouri, and Oklahoma established a state park foundation to support the respective state park system. Only Indiana State Parks supplied staff time for the foundation initiatives (Table 37).

Table 37

State Park Foundation

State park foundation	AR	GA	IN	MO	NC	OK
Existence			Y	Y		Y
Park division’s support (staff time)			Y			

Y indicates “Yes”; shaded areas indicate “No”

The participating state park systems were asked to self-evaluate the support that the agency received from citizen advocacy groups. Four state park systems self-rated

the support they received from citizen advocacy groups as good or very good (Table 38). Arkansas State Parks explained that they were striving to establish and grow the friends groups for each state park. A volunteer manual was established in the 1980s and it served as the guide for parks managers to manage their friends groups. Missouri State Parks suggested that they gained citizen advocacy group support from the grass roots level and the agency supported such efforts. Georgia State Parks commented that although their partnership between the agency and citizen advocacy groups was not satisfactory, they were re-establishing their relationship with their citizen advocacy groups and developing an action plan for it.

Table 38

Self-rating on Support from Citizen Advocacy Groups

Rating	AR	GA	IN	MO	NC	OK
Outstanding						
Very good	Y			Y	Y	
Good			Y			
Mediocre		Y				Y

Y indicates “Yes”; Shaded areas indicate “No”

Summary

The level of Oklahoma State Parks’ visitation was significant, ranking second in both day visitors and overnight visitors among six state park systems. Missouri State Parks received the largest number of day visitors and Indiana State Parks reported the

largest number of overnight visitors. On volunteers support, the volunteer groups of the Arkansas State Parks, Indiana State Parks and North Carolina State Parks provided more types of management assistance did Oklahoma State Parks. All benchmarking partners except Georgia State Parks provided training or orientation for volunteers. Oklahoma State Parks did not provide training for volunteers.

On the services to the under-served populations, three state park systems, Arkansas, Missouri, and North Carolina provided a procedure for the under-served populations to voice opinions in the management decisions of state parks. With the exception Georgia State Parks, all the other benchmarking partners designated professional staff members to review accessibility of properties, programs, and services for people with disabilities. All benchmarking partners except Georgia State Parks provided telephone systems that had provisions to accommodate to people with disabilities. The majority of the properties in Missouri State Parks and North Carolina State Parks were compliant with ADA standards.

Oklahoma State Parks was one of three state park systems that established a state park foundation, along with Missouri State Parks and Indiana State Parks. Indiana State Parks was the only system that provided staff support for their foundation. All benchmarking partners except Georgia State Parks rated themselves better in citizen advocacy groups than did Oklahoma State Parks.

Factor 7: Staffing and Personnel

AIX 2004 Information

Figure 21 shows the number of full-time staff in six state park systems. Part-time central office and field professionals were not included in Figure 21 because there were few part-time park professionals in these state park systems. There was one part-time field professional in Arkansas State Parks and five part-time field

professionals in Georgia State Parks. There was no part-time central office staff in six state park systems. The number of full-time park professionals in Georgia State Parks was larger than the other five state parks systems, with over 700 in total. Oklahoma State Parks ranked second with over 300 full-time professionals. There were 200 to 300 full-time professionals in North Carolina State Parks, Arkansas State Parks and Missouri State Parks. There were 101 full-time staff members in Indiana State Parks.

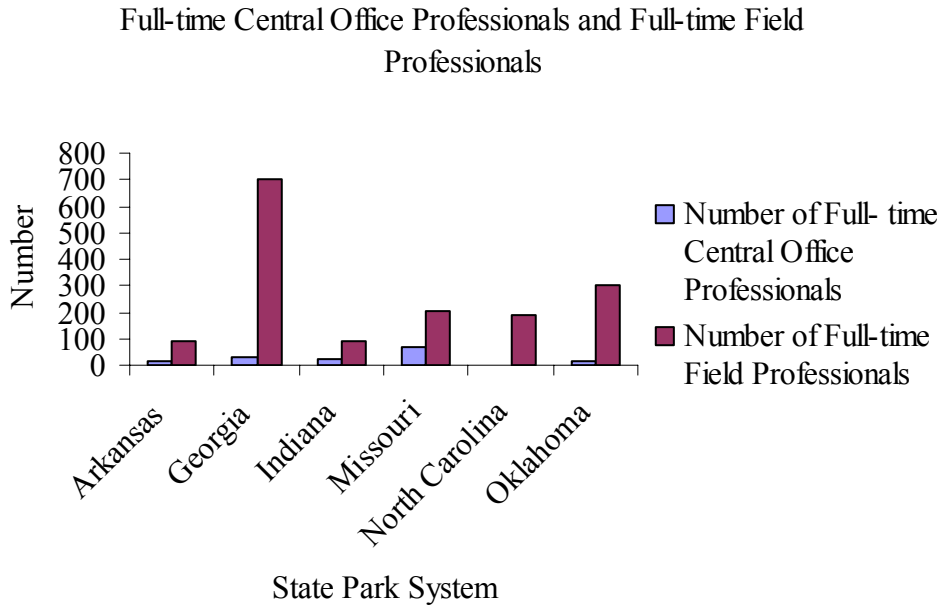


Figure 21

Number of Full-time Central Office Professionals and Field Professionals

Benchmarking Survey

Fifteen questions in the benchmarking survey concentrated on staffing and personnel. The first four questions were about the personnel management system of each state park system. The job classification determined whether employees would be considered as members of a state civil service system in four state park systems,

Arkansas, Georgia, Missouri, and Oklahoma. Fewer than 50% of the employees in Georgia State Parks and Oklahoma State Parks were in the state civil service system. In Arkansas State Parks and Missouri State Parks, more than 75% of employees were in the state civil service system (Table 39).

Table 39

Employees in Civil Service System

State parks systems	AR	GA	IN	MO	NC	OK
Linkage to job classification	Y	Y		Y		Y
Less than of 50% employees		Y				Y
More than of 75% employees	Y			Y		

Y indicates “Yes”; shaded areas indicate “No”

The employees who were not in the civil service system were limited to certain job functions in Missouri State Parks and Oklahoma State Parks. The employees who were not in the civil service system were not limited in the areas of employment in Georgia State Parks. In Missouri State Parks, the areas of employment were limited to part-time or temporary positions and administration. In Oklahoma State Parks, such limitations included lodge operations, golf course operations, and part-time or temporary positions (Table 40).

Table 40

Limitation on Job Functions for Non-civil Service Employees

Job function	AR	GA	IN	MO	NC	OK
Lodge operations	N/A	N/A	N/A		N/A	Y
Golf course operations	N/A	N/A	N/A		N/A	Y
Part-time or temporary positions	N/A	N/A	N/A	Y	N/A	Y
Other	N/A	N/A	N/A	Y	N/A	

Y indicates “Yes”; shaded areas indicate “No”; N/A indicates “Not applicable”

The fifth question asked about the staff turnover rate of each state park system. Only Indiana State Parks had a turnover rate of less than 5%. All other five state park systems reported an annual turnover rate of 5% to 10% among professional field staff, excluding retirements (Table 41).

Table 41

Turnover Rate

Rate	AR	GA	IN	MO	NC	OK
Less than 5%			Y			
5% to 10%	Y	Y		Y	Y	Y

Y indicates “Yes”; shaded areas indicate “No”

The next three questions related to the law enforcement personnel in state park

systems. No employees in Indiana State Parks were law enforcement personnel. Both Missouri State Parks and Oklahoma State Parks had 25 to 50 law enforcement employees. Arkansas State Parks, Georgia State Parks and North Carolina State Parks included over 50 law enforcement employees as part of their professional staff (Table 42).

Table 42

Law Enforcement Personnel

Number	AR	GA	IN	MO	NC	OK
None			Y			
25 to 50				Y		Y
More than 50	Y	Y			Y	Y

Y indicates “Yes”; shaded areas indicate “No”

Both Arkansas State Parks and Oklahoma State Parks indicated that their law enforcement personnel reported to state park managers. Indiana State Parks and Missouri State Park suggested that their law personnel reported to law enforcement officials of higher level. North Carolina law enforcement personnel reported to both park mangers and law enforcement officials of higher level. All law enforcement officers in Georgia State Parks reported to the Chief of Georgia State Parks Law Enforcement (Table 43).

Table 43

Responsible Personnel for Law Enforcement Employees

Personnel	AR	GA	IN	MO	NC	OK
Park manager	Y				Y	Y
Law enforcement personnel			Y	Y	Y	
Others		Y				

Y indicates "Yes"; shaded areas indicate "No"

In Arkansas, Georgia, North Carolina, and Oklahoma, law enforcement employees were expected to serve in interpretive roles while in the other two state park systems, Indiana State Parks and Missouri State Parks, the law enforcement employees did not have such responsibilities (Table 44).

Table 44

Role of Law Enforcement Personnel

State parks systems	AR	GA	IN	MO	NC	OK
Serve in interpretive roles	Y	Y			Y	Y

Y indicates "Yes"; shaded areas indicate "No"

Question 9 and 10 related to the qualifications of professional staff in state park systems. The entry-level qualifications required for personnel who serve as naturalists, interpreters, or environmental educators varied among state park systems. Four state

park systems, Arkansas, Georgia, Indiana, and North Carolina required interpretive staff to have baccalaureate degrees in science history. Furthermore, Georgia State Parks, Indiana State Parks and North Carolina State Parks required baccalaureate degrees in parks and recreation for interpretive staff. Missouri State Parks required baccalaureate degrees without a specific major for interpretive staff (Table 45).

Georgia State Parks and Missouri State Parks explained that experiences might substitute degree requirement. None of the state park systems required interpretive staff to have teaching certificate, certification through the National Association for Interpretation, or certification in specialized programs such as Water Education for Teachers (WET), WILD, Project Learning Tree (PLT), etc.

Table 45

Qualification Requirements on Interpreters

Qualifications	AR	GA	IN	MO	NC	OK
Baccalaureate degree in science/history	Y	Y	Y		Y	
Baccalaureate degree in parks and recreation		Y	Y		Y	
Baccalaureate degree without specifically required major				Y		

Y indicates “Yes”; shaded areas indicate “No”

The minimum qualifications required for park managers were similar among state park systems (Table 46). All six state park systems required state park managers

to have at least baccalaureate degrees in parks and recreation or closely related field. Additionally, Oklahoma State Parks required baccalaureate degrees in law enforcement for level II state parks managers. In Georgia State Parks and Missouri State Parks, park management experiences may substitute for the educational degree requirement.

Table 46

Qualifications Requirements for Park Managers

Qualifications	AR	GA	IN	MO	NC	OK
Baccalaureate degree in law enforcement						Y
Baccalaureate degree in parks and recreation	Y	Y	Y	Y	Y	Y

Y indicates “Yes”; shaded areas indicate “No”

The last five questions related to the professional staff development in state park systems. Three state park systems, Arkansas, Missouri and North Carolina provided career development programs for employees. Almost all employees, especially those who were in management positions, were included in career development programs in these three state park systems. Moreover, four state park systems, Arkansas, Georgia, Indiana, and Missouri provided trainee programs. Such programs were provided for employees at different levels, from interpreters, rangers to superintendents and managers. Table 47 illustrates the topics that were included in the career development programs in the state park systems. Oklahoma State Parks did

not have career development programs and trainee programs.

Table 47

Components of Career Development Program

Topics	AR	GA	IN	MO	NC	OK
Finance and revenue management	Y			Y	Y	N/A
Human resources	Y			Y	Y	N/A
Interpretive services	Y			Y	Y	N/A
Law and legal issues				Y		N/A
Leadership development				Y	Y	N/A
OSHA compliance	Y				Y	N/A
Playground safety and inspection	Y					N/A
Resource management	Y			Y	Y	N/A
Risk management					Y	N/A
Security and law enforcement	Y				Y	N/A
Technical topics	Y				Y	N/A
Volunteer services	Y				Y	N/A
Others				Y		N/A

Y indicates “Yes”; shaded areas indicate “No”; N/A indicates “Not applicable”

Summary

The personnel management system of Oklahoma State Parks was similar to that of Missouri State Parks. These two state park systems shared the following similarities in their staffing and personnel. The number of full-time central office and field professionals in the two state park systems was similar. Job classification was a factor that determined whether employees were to be considered as members of the state civil service system. Fewer than 50% of the employees in the state park systems were in the state civil service system. Employees who were not in the civil service system were limited to certain areas of employment, although the limitations on specific job functions were different in the two state park systems. Both state park systems had approximately 5% to 10% annual turnover rate and employed 25 to 50 law enforcement personnel.

Oklahoma State Parks was similar to Arkansas State Parks in the management of law enforcement personnel. Law enforcement personnel reported only to park managers. In the other four state park systems, law enforcement personnel reported either law enforcement officials of higher level or both park managers and law enforcement officials. Law enforcement personnel served in interpretive roles in Oklahoma State Parks and Arkansas State Parks.

All five benchmarking partner maintained qualification standards for personnel who served as naturalists, interpreters, or environmental educators. Oklahoma State Parks did not specify such requirements. Oklahoma State Parks' requirement for park managers was similar to that of the benchmarking partners. Additionally, Oklahoma State Parks required law degrees for level II park managers. Three state park systems, Arkansas, Missouri, and North Carolina provided career development programs with a variety of topics. Oklahoma State Parks did not provide career development

programs for employees.

Factor 8: Stewardship

Benchmarking Survey

There were 13 questions in this section. The first question examined whether state park systems utilized resource management models to manage the resources. These models included Recreation Opportunity Spectrum (ROS), Limits of Acceptable Change (LAC) by the United States Forest Service; and Visitor Experience and Resource Protection (VERP) by the National Park Service. These resource management models addressed user capacity of resources to protect both visitor experiences and environment. With the exception of Oklahoma State Parks, all benchmarking partners reported that they incorporated at least one of the above models into their decision processes.

Table 48 explains the resource management models used by each state park system. All five benchmarking partners used Visitor Experience and Resource Protection models. In addition, Georgia State Parks also used Recreation Opportunity Spectrum and carrying capacity to manage their resources. Both Arkansas State Parks and Missouri State Parks used Limits of Acceptable Change and carrying capacity in addition to Visitor Experience and Resource Protection. North Carolina State Parks used Recreation Opportunity Spectrum in addition to Visitor Experience and Resource Protection. North Carolina State Parks only used VERP. Oklahoma State Parks used none of these models.

Table 48

Utilization of Resource Management Models

Management model	AR	GA	IN	MO	NC	OK
Recreation Opportunity Spectrum	Y	Y			Y	
Limits of Acceptable Change				Y		
Carrying capacity	Y	Y		Y		
Visitor Experience and Resource Protection	Y	Y	Y	Y	Y	
None						Y

Y indicates "Yes"; shaded areas indicate "No"

The second question asked the participating agencies whether they established a baseline inventory of natural and cultural resources. All five benchmarking partners established a baseline inventory. Arkansas State Parks suggested that they updated their inventory over time based on research. Georgia State Parks indicated that the most recent date that they updated the inventory was 2001. In this inventory, Georgia State Parks initiated an ongoing survey at 12 key parks called "Plants of Concern". Missouri State Parks suggested that their inventory was an ongoing process. Indiana State Parks reported that they had completed the inventory of half of their properties and the other half was to be completed. Indiana State Parks did not specify the time though. Table 49 demonstrates the details.

Table 49

Baseline Inventory of Natural and Cultural Resource

State parks system	AR	GA	IN	MO	NC	OK
Baseline inventory	Y	Y	Y	Y	Y	
Most recent inventory date	2004	2001				N/A

Y indicates “Yes”; shaded areas indicate “No”; blank areas indicate “Missing”; N/A indicates “Not applicable”

Four state park systems reported the number of properties they purchased in the last two years (Figure 22) Oklahoma State Parks did not purchase any properties in the last two years. Missouri State Parks purchased 587 new properties and Arkansas State Parks purchased 709 new properties. Indiana State Parks bought 3079 new properties and North Carolina State Parks acquired 4,573 properties in the last two years. Georgia State Parks did not specify the acreage they purchased in the last two years, but they reported that they had 27,000 acres increase in the last 11 years in their state park system.

Figure 22

Recent Property Purchases

Question 5 and 6 examined whether the state park agencies managed any properties that were not available for public use and development and the specific acreages of the land that were unavailable for public use and development. With the exception of Oklahoma State Parks, all benchmarking partners managed such properties. Figure 23 explains the specific acres that were not available for public use or development in three state park systems. There were 8,000 acres of land that were not available for public use or development in Georgia State Parks. North Carolina State Parks had 30,000 acres of such land. Among the 40,000 acres of land that were unavailable for public use or development in Missouri State Parks, 23,000 acres were for the Wild Area Program and 17,000 acres were designated as Missouri Natural Areas. Both Arkansas State Parks and Indiana State Park did not report the specific

acres of lands restricted from the public use or development. Oklahoma State Parks did not report that they had any lands that were not available for public use or development.

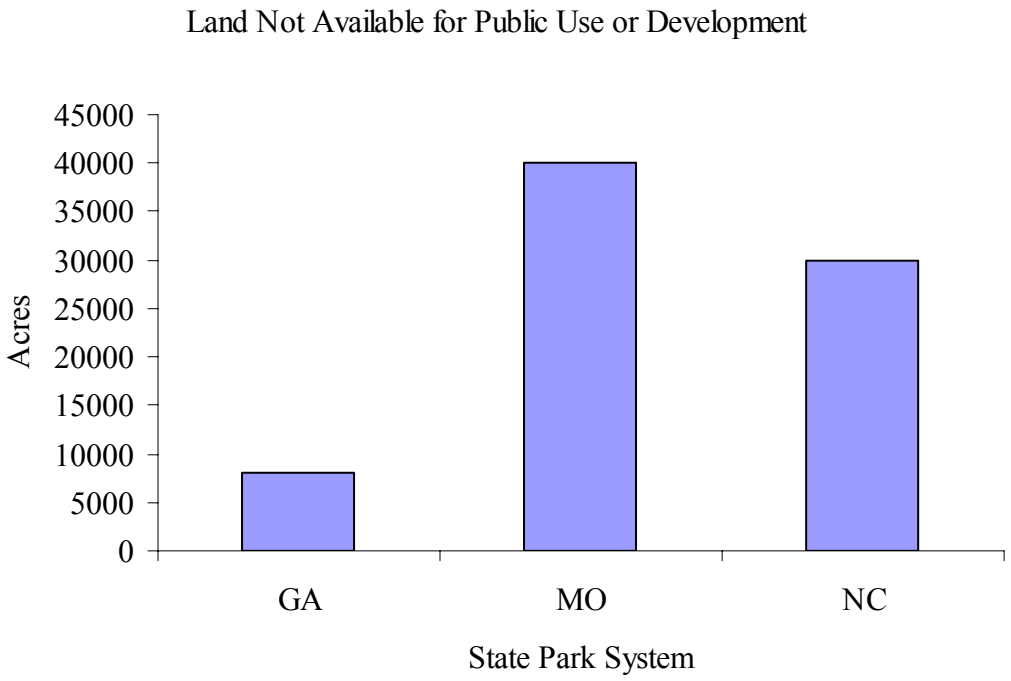


Figure 23

Land Unavailable for Public Use or Development

Three state park systems reported that they established a monitoring process to determine the level of care necessary to protect or enhance resources. Arkansas State Parks, Missouri State Parks and North Carolina State Parks established such processes while the other three state park systems did not have such processes (Table 50).

Table 50

Existence of Monitoring Process for Resource Protection

State park system	AR	GA	IN	MO	NC	OK
Monitoring process	Y			Y	Y	

Y indicates “Yes”; shaded areas indicate “No”

Two state park systems, Georgia State Parks and North Carolina State Parks stated that they were required to prepare a state level environmental impact assessment/statement prior to activities that may change use of properties (Table 51).

Table 51

Requirement on State Level Environmental Impact Assessment

State park system	AR	GA	IN	MO	NC	OK
Environmental impact assessment		Y			Y	

Y indicates “Yes”; shaded areas indicate “No”

Question 9 examined whether state park systems included state officials in the decisions related to management of properties. Table 52 demonstrates the inclusion of state officials in the decision process in six state park systems. All six state park systems utilized State Historic Preservation Officer (SHPO) to assist the management of state park properties. Arkansas State Parks included state fish and game specialists and members from the Arkansas Archeological Survey, in addition to SHPO in the decision process. Georgia State Parks also included state biologists, state fish and

game specialists and officers from environmental protection agencies in the decision process of the property management. Missouri State Parks also incorporated state biologists into decision process in addition to SHPO while Oklahoma State Parks included state fish and game specialists besides SHPO in the decision process of resource management. None of the state park systems included state geographers or state GIS officers into their decision process of resource management (Table 52).

Table 52

Inclusion of State Officials in Decision Process

State official	AR	GA	IN	MO	NC	OK
State Historic Preservation Officer	Y	Y	Y	Y	Y	Y
State biologist		Y		Y		
State fish and game specialist	Y	Y				Y
State geographer						
Others	Y	Y			Y	

Y indicates “Yes”; shaded areas indicate “No”

Question 10 asked the participating agencies whether they maintained a partnership agreement or other working agreement with non-government advocacy organizations such as Trust for Public Land, The Nature Conservancy, or the Farmland Trust. Three state park systems, Georgia, Missouri, and North Carolina reported they maintained such a partnership with the non-governmental advocacy

groups (Table 53). The other three state park systems did not report that they maintained partnership agreement with non-government advocacy organizations.

Table 53

Partnership with Non-government Advocacy Organizations

State parks systems	AR	GA	IN	MO	NC	OK
Partnership agreement		Y		Y	Y	

Y indicates “Yes”; shaded areas indicate “No”

Question 11 asked the participating agencies to name the top three factors that the state park agencies used to develop facilities. Visitor demand was the most frequently mentioned reason in the top three factors. Four state park systems, Arkansas, Georgia, Indiana, and North Carolina stated that visitor demand was one of their top factors to make decisions for facility development. For Arkansas State Parks and Indiana State Parks, visitor demand was the first priority in facility development. For Georgia and State Parks and North Carolina State Parks, it was the second most important factor in facility development decisions.

Three state park systems, Arkansas, Georgia, and North Carolina suggested that resource protection was one of the top factors to make facility development decisions. Resource protection was the most important factor for Georgia State Parks and North Carolina State Parks. It was the third most important factor for Arkansas State Parks. For two state park systems, Georgia and Oklahoma, political pressure was one of the major factors in facility development. Political pressure was the most important factor for Oklahoma State Parks and the third most important factor for Georgia State Parks.

Missouri State Parks and Oklahoma State Parks stated that staff input such as park manager's request was one of the primary factors. Staff input was the most important factor for Missouri State Parks and third most important factor for Oklahoma.

There was a variety of other important factors in facility development in state park systems. Carrying out the multiple missions, including resource protection, recreation provision, and tourism development were important for Arkansas State Parks. For Indiana State Parks, impact on existing facilities and the facility appropriateness or aesthetics were important. Missouri State Parks based facilities development decisions on public input and revenue generation. Funding availability was another crucial factor for North Carolina State Parks. Oklahoma State Parks considered enforcement actions for violations as one of the important factors. Table 54 is a summary of the ranking on the major factors that affect the decisions on facility development among six state park systems.

Table 54

Ranking of Top Factors on Facility Development

Factors	AR	GA	IN	MO	NC	OK
Visitor demand	1	2	1		2	
Resource protection	3	1			1	
Political pressure		3				1
Staff input				1		3
Other factor	2		2,3	2,3	3	2

Six state park systems reported the most pressing stewardship issues facing state park agencies (Table 55). Invasive species was the major problem for three state park systems, Georgia, Indiana, and North Carolina. Both Arkansas State Parks and Oklahoma State Parks had the problem of overuse and erosion. Missouri State Parks did not specify the major stewardship issues, although they mentioned that insufficient staff and funding had a significant impact on the resource management.

Table 55

Major Stewardship Issues

Factor	AR	GA	IN	MO	NC	OK
Invasive species		Y	Y		Y	
Overuse and erosion	Y					Y

Y indicates “Yes”; shaded areas indicate “No”

Lastly, six state park systems reported their current resource conservation projects. There was a variety of projects underway in six state park systems (Table 56). Four state park systems, Arkansas, Indiana, Missouri, and North Carolina reported habitat restoration programs. Georgia State Parks, Indiana State Parks and North Carolina State Parks established species control programs. Missouri State Parks and North Carolina State Parks established prescribed fire programs. Other miscellaneous stewardship programs included forest management program and interpretive plans for each state park in Arkansas State Parks, site cleaning and soil management in Indiana State Parks, cultural and historic resource management programs in Missouri State Parks, and water management and continuing resource inventory in North Carolina

State Parks. In Oklahoma State Parks, there were three major infrastructure repair and replacement projects underway.

Table 56

Major Resource Conservation Projects

Project	AR	GA	IN	MO	NC	OK
Habit restoration	Y		Y	Y	Y	
Species control		Y	Y		Y	
Prescribed fire program				Y	Y	
Others	Y	Y	Y	Y	Y	Y

Y indicates “Yes”; shaded areas indicate “No”

Summary

Oklahoma State Parks did not use resource management models in their decision process while all benchmarking partners used at least one of the suggested models. The two neighboring benchmarking partners used three suggested management models. All benchmarking partners established a baseline inventory of natural and cultural resources inventory. Oklahoma State Parks did not have a resource inventory. All benchmarking partners purchased new properties for resource development in last two years. Oklahoma State Parks did not purchase any new property in last two years. All benchmarking partners had properties reserved for non-public use or development. Arkansas State Parks, Missouri State Parks and North Carolina State Parks established a monitoring process to determine the level of care

necessary to protect resources. Oklahoma State Parks did not have such a monitoring process to determine the level of care necessary to protect resources.

On the state environmental mandate on resources, Oklahoma State Parks was similar to most of its benchmarking partners, including those two neighboring benchmarking partners. They were not required to prepare environmental impact assessment prior to activities that may change use of properties. Only Georgia State Parks and North Carolina State Parks were required to do so. The inclusion of state officials in resource management in Oklahoma State Parks was similar to most of its benchmarking partners. Georgia State Parks included more state officials than did other park systems. Georgia State Parks, Missouri State Parks and North Carolina State Parks maintained partnership agreements with non-government advocacy organizations to enhance the quality of their resource management. Like Arkansas State Parks, Oklahoma State Parks faced issues of overuse and erosion in their natural resources. The five benchmarking partners had a greater variety of conservation projects underway than did Oklahoma State Parks.

Summary of Benchmarking Questionnaire Findings

Each benchmarking partner demonstrated strengths on different aspects of management practices. For example, among six state park systems in this study, Arkansas State Parks was strong in marketing plan, information service, maintenance practices, master planning, and service to under-served populations. Georgia State Parks showed excellence in concessionaire management, marketing plan, information service, maintenance planning and master planning, personnel development program and services to under-served populations. Indiana State Parks was outstanding in revenue, interpretive programs, and volunteer support among six state park systems. Missouri State Parks was exceptional in dedicated funding, maintenance and master

planning, public support, personnel development, and service to people with disabilities among six state park systems. North Carolina State Parks was extraordinary in capital expenditure planning, public and volunteer support, career development program and service to under-served populations among six park systems. Oklahoma State Parks demonstrated strengths on areas such as number of visitations to state parks and concession revenue. Overall, benchmarking partners demonstrated better management practices in more areas than did Oklahoma State Parks.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This section discusses the potential interpretation of the results presented in the previous chapter. Since this study used Oklahoma State Parks as the focus of the benchmarking process, recommendations to Oklahoma State Parks are discussed. Finally, this section concludes with implications for future research.

Conclusions

Implications of Benchmarking Study Findings

This study demonstrated a benchmarking process in state park settings, using Oklahoma State Parks and other five state park systems as examples. The study revealed that some state park professionals in Oklahoma State Parks had limited understandings or misconceptions on the benchmarking technique. For example, the results of the internal survey with Oklahoma Tourism and Recreation Department showed that respondents believed that benchmarking could only be conducted internally, not externally. Some respondents had misconceptions on state park systems. Some assumed that geographic closeness equaled similarities. As shown in this study, all the neighboring state park systems of Oklahoma State Parks were different from Oklahoma State Parks. This study may help the professionals in Oklahoma State Parks have a better understanding of other state park systems that are similar and dissimilar to Oklahoma State Parks. The findings of the study showed that Oklahoma State Parks shared similarities and differences with both their similar and dissimilar partners.

The findings of this benchmarking study also revealed the similarities and

differences of management practices in six state park systems. On similarities, for example, six state park agencies kept the traditional reservation method and some state park systems provided new reservation method, such as on-line reservations as additionally means to state parks' visitors. The management staff members in six state park systems consider public feedbacks of great significance, which is important to maintain the quality of facilities and services to meet public expectations. The turnover rate of state park agencies is fairly healthy to keep the agencies dynamic. On differences, for example, the different emphases on the dedication of capital funding in six state park systems indicate that the status and condition of the facilities might be different. The differences in the ownership and installation of concessionaire facilities indicate the nature and types of concessionaires vary in six state park systems.

The benchmarking study findings also revealed the common problem areas that six state park systems had in this study. For instance, few state park systems conducted feasibility analysis study before utilizing the funds required or generated by concessionaires. Few state park systems had a systematic planning process in marketing efforts. Few state park systems established maintenance plans for each property. Most state park systems in this study did not have adequate capital funding, which was reflected in the tremendous amount of deferred backlogs of maintenance. This indicates that state park systems need to seek additional funding sources other than general appropriations to alleviate the problem of large backlogs. State park systems need to improve their facilities and services to accommodate the under-served populations, including those people with disabilities. The qualification requirements for interpretive staff in six state park systems indicate that although interpretive staff had necessary education requirements, they may not have adequate knowledge in

specialized areas of interpretation. State park agencies need to strive to raise the standards for their interpretive staff to provide better quality interpretive programs for visitors.

Implication of Benchmarking Technique Application in State Parks

This is the first benchmarking study in state parks. This study was an exploratory process of utilizing benchmarking technique to examine the management and operation of state park systems. This study demonstrated that benchmarking technique is applicable in the state park settings, which answers the first two research questions. However, this benchmarking process was slightly different from the traditional benchmarking process. This was reflected in the process of determining benchmarking measures and benchmarking partners in the planning stage of the study. Because Oklahoma State Parks did not have a clear understanding on the critical performance measures for the benchmarking at the beginning of the study, the researcher suggested utilizing a Delphi technique to seek expert opinions to discover the most important benchmarking measures. Moreover, there were not universally recognized standards for the practices and management in state parks; therefore, it was difficult to determine the "best practices" in state park systems. Therefore, the researcher decided to use "comparable practices" in this study. A cluster analysis was utilized to determine comparable benchmarking partners. The results showed that the comparable benchmarking partners chosen in this study were the ones that demonstrated "better practices". Organizations that are new to the benchmarking technique may find difficult to discover the important benchmarking measures and appropriate benchmarking partners, and the methods used in this study may be valuable to them to discover benchmarking measures and benchmarking partners.

This benchmarking study utilized multiple benchmarking partners.

Collaborating with multiple benchmarking partners provided advantages for the Oklahoma State Parks to learn better practices from more than one source. The disadvantage of having multiple benchmarking partners is that it is more difficult to gain cooperation from multiple benchmarking partners rather than one benchmarking partner. Demonstrating mutual benefits to the benchmarking partners may help gain the support and cooperation from the benchmarking partners. In this study, the entire benchmarking process will be shared with all the benchmarking partners. All benchmarking partners will receive the report on the findings of the study.

The process of the study confirmed that benchmarking is a process that requires significant amount of time and resources. This benchmarking study took place over a period of one and half years. This study also confirmed that a successful benchmarking study requires commitment of the agency that conducts the benchmarking study and commitment of benchmarking partners. The commitment of the benchmarking partners is especially crucial. A part of this benchmarking study was to answer a self-administered questionnaire, which required the participants to devote time and staff provide detailed information on the management and operation of various aspects of their state park systems. Without the commitment of the benchmarking partners, it would have been difficult to collect the needed benchmarking data.

The study originally intended to have six state park systems as benchmarking partners. However, during the benchmarking survey process, two benchmarking partners who agreed to participate in the study were delayed in response to the questionnaire. One partner did not respond and it was excluded from the analysis. Therefore, the study lost one benchmarking partner and concluded with five benchmarking partners instead of six benchmarking partners.

Benchmarking Model

This section answers research question 7: what benchmarking process model can be developed that is appropriate for benchmarking state park systems? This study developed a benchmarking model for state parks based on the research process. This is an eight-step benchmarking model and each step is built upon the findings of the former steps (Figure 24).

The first step is a process of establishing the goal or the direction of the study. The researcher consulted with experts through the Delphi technique to discover the key performance measures that were to be used in this benchmarking study. The following step is a process of distinguishing the potential benchmarking partners to determine the most appropriate benchmarking partner. A statistical tool, cluster analysis, was utilized based on the park operation data to differentiate groups of similar and dissimilar benchmarking partners.

The third step is a confirmation process with the benchmarking organization, which was the Oklahoma State Parks in this study, to make the final determination on benchmarking measures and benchmarking partners. A self-administered survey was conducted within the benchmarking organization. Input from the benchmarking organization is important because it ensures the correct direction of the benchmarking study, especially when a third party conducts the study rather than the staff members within the organization conduct the study. The fourth step was to gain cooperation from the benchmarking partners. Collaborating with committed benchmarking partners is extremely crucial to the success of a benchmarking study. If the benchmarking partners could see benefits of participation of the study, they would be more likely to participate. The fifth step is the data collection stage. A benchmarking questionnaire was designed for this study to collect detailed information on the

operation and management of state park systems.

The sixth step is to analyze the information collected on both the benchmarking organization and that of the benchmarking partners to compare the differences and discover the gaps between the benchmarking organization and the benchmarking partners. The seventh step is to communicate findings both within one's own organization and with the benchmarking partners. This is a process of learning from the better practices from the benchmarking partners and sharing the findings with the benchmarking partners. The eighth step is to implement what is learned into one's own practices, which is a crucial step that ultimately determines whether a benchmarking study is successful or not.

The entire eight-step benchmarking process is presented in a circle, symbolizing and demonstrating that benchmarking is a continuing process because the practices by the benchmarking partners are constantly changing and an organization must make continued efforts to learn from others. The general frame of this benchmarking model is based on the Deming cycle discussed in the early chapter, which consisted of four fundamental steps: plan, collect, analyze, and improve.

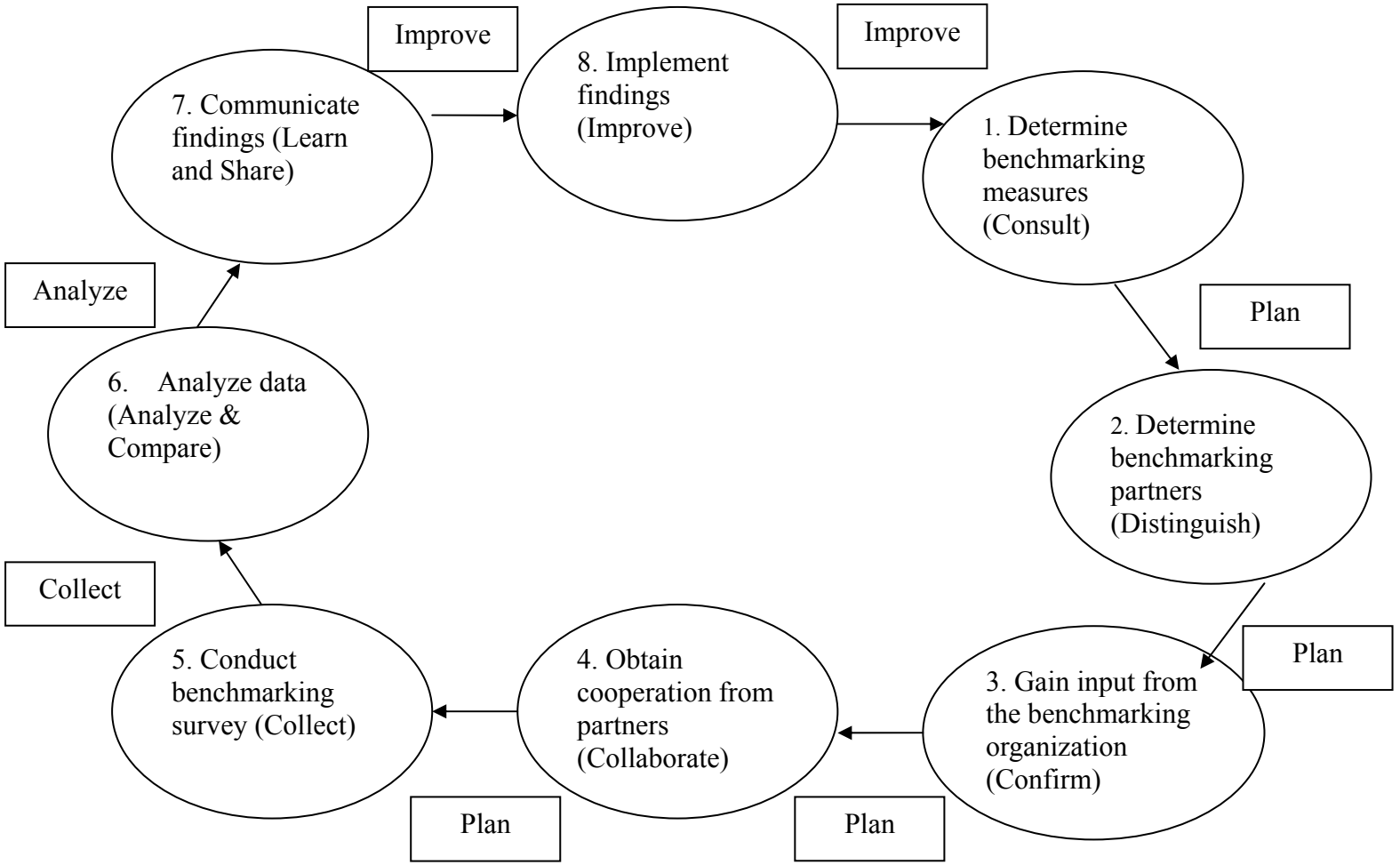


Figure 24 State Parks Benchmarking Model

Recommendations to Oklahoma State Parks

Since the focus of this study was the Oklahoma State Parks, the researcher made the following recommendations related to the implementation of the benchmarking findings to the Oklahoma State Parks for future operation and management. This will answer research question 8 in this study: What changes that the Oklahoma State Parks should make to incorporate the practices learned from the benchmarking partners? These recommendations are based on the practices of the five benchmarking partners in this study.

Financial Support

1. Consider establishing dedicated funds, such as dedicated taxes, as an additional source to support the state park system, especially for capital improvements.

2. Improve the long-range capital expenditure plan so that it may guide the actual capital expenditures in state parks.

3. Improve capital expenditure plans that balance the needed repair of the existing facilities and the construction of new facilities.

4. Develop an evaluation plan with specific goals and objectives to evaluate the urgencies of the need for capital projects. The evaluation plan should provide a systematic method to prioritize the capital expenditure with staff input.

Concessionaires

1. Consider utilizing a higher percentage of gross revenue paid by concessionaires as concessionaire fees to increase concessionaire revenue, if that higher percentage is consistent with level of business at these concession operations.

2. Establish specific performance objectives for the concessionaire contractors to manage and evaluate the performances of concessionaire contractors.

3. Conduct regular annual evaluations on concessionaire contractors to ensure the quality of service of concessionaires.

4. Conduct feasibility analysis studies to determine the utilization of funds required or generated by concessionaires.

Marketing and Public Information

1. Improve the website of state parks to provide more information to public. Add information such as overview of the agency, mission statement, parks news, job opportunities, staff information, electronic newsletter, planning documents, and detailed descriptions of each property.

2. Increase marketing budget through additional sources other than state general appropriations, which may include funds from concessionaires, friends/groups, and other sources.

3. Develop a systematic marketing plan to guide marketing efforts.

4. Conduct conversion studies, visitor satisfaction studies, or use additional methods to evaluate the effectiveness of the marketing plan.

5. Conduct regular customer surveys to assess visitor satisfaction.

6. Designate additional staff, such as parks staff or a public relations specialist to respond to public comments.

7. Consider establishing on-line reservation service as additional reservation medium.

8. Develop standards for interpretive programs for the entire state park system.

9. Develop an interpretive program plan for each state park.

10. Establish interpretive programs on each property and increase the number of interpretive staff.

11. Increase the allocation of the budget to interpretive programs.

Maintenance

1. Develop maintenance standards for the entire state park system.

2. Develop a maintenance plan/program for each property.

3. Establish a tracking system to track the status of maintenance projects such as completed projects, scheduled projects, or backlogs, etc. and make it accessible to park managers.

4. Apply national or industry standards, such as NRPA's maintenance standards for maintenance practices.

5. Seek additional source of funding, such as capital funds and endowed funds and other sources to reduce the backlog of maintenance projects.

Planning

1. Develop a comprehensive master plan for the entire state park system and for each property. The master plan should include the following components: business plan, capital improvement plan, comprehensive land acquisition plan, development plan, marketing plan, resource management plan, risk management plan, staff development plan, and interpretation program plan.

2. Update the master plan for the entire system and for each property regularly.

3. Develop an action plan for the implementation of the master plan.

4. Establish system-wide standards on facility designs, signage guidelines, and other operational procedures.

Public Involvement and Constituent Understanding

1. Establish guidelines and policies for volunteer groups.

2. Establish volunteer training or orientation programs.

3. Improve the accessibility of state park facilities.

4. Designate professional staff to review accessibility issues, including

accessibility of properties, program, and services, regularly.

5. Develop a procedure that incorporates the input of the under-served populations into management decisions.

6. Add additional services to people with disabilities, such as accessible website and telephone system.

7. Re-energize the state park foundation and revive the relationship with the citizen advocacy groups. Examine the mission of the foundation and establish programs that work with citizens, lawmakers, and community and business leaders. Consider designating staff time for foundation initiatives.

Staffing and Personnel

1. Establish career development programs for state park professionals at different levels. The career development program may include topics such as finance and revenue management, human resource management, interpretive services, law and legal issues, leadership development, OSHA compliance program, playground safety and inspection, resource management, risk management, security and law enforcement, technical assistance program, volunteer program, etc.

2. Develop a trainee program for those employees who do not have much expertise in park operation and management to help them gain necessary knowledge and competence in their positions.

3. Develop interpretive staff training programs to enhance the quality of interpretive services.

4. Raise qualification standards for the interpretive staff. Interpretive staff should be encouraged or required to have specialized certifications such as certification from the National Association for Interpretation and certifications in WET, WILD, PLT, etc.

5. Maintain the qualification standard for level II park managers and expand such requirements for all park managers to increase the competence of park management personnel.

Stewardship

1. Incorporate resource management models into resource management process. For example, use the Recreation Opportunity Spectrum (ROS) model to distinguish park resources and provide recreation experience that is compatible to the characteristics of the property for park visitors. Utilize the Limits of Acceptable Change (LAC) model to determine acceptable and unacceptable changes on resource. Use carrying capacity and the Visitor Experience and Resource Protection (VERP) model to achieve the goal of providing quality recreation experiences for visitors and protecting resources at the same time.

2. Establish a baseline inventory of natural, cultural, and historical resources within the state park system and update the inventory regularly.

3. Develop land acquisition plans for the entire system and each state park.

4. Designate non-public use or development areas that contain fragile resources.

5. Develop a monitoring process to determine level of care necessary to protect resources.

6. Conduct environmental impact assessment prior to activities that may change use of the properties to ensure resource protection.

7. Incorporate state officials such as State Historic Preservation Officer, state biologist, state fish and game specialist, state geographer, etc. into resource management process.

8. Establish partnership with non-government advocacy organizations, such as Trust for Public Lands, The Nature Conservancy, Farmland Trust, etc. to ensure the

quality of resource protection.

9. Incorporate public input and staff input in facility development.

10. Develop comprehensive resource management plans for the entire state park system and each property.

11. Designate additional funding for more resource conservation efforts.

Implications for Future Studies

This exploratory benchmarking study lays groundwork for similar benchmarking studies on state parks in the future. This study represented the first attempt to use benchmarking technique in state park settings. It was the first study to explore the benchmarking process among state park systems. The suggestions for future research are as following:

1. This study investigated a wide scope of issues in the operation and management of state park systems. However, the in-depth information on specific aspects of state park management was limited. Further benchmarking study should be conducted to collect in-depth information on park operations.

2. Future studies should be conducted on the implementation of the benchmarking study results to evaluate the effectiveness of benchmarking on the management of a state park system.

3. Future studies may focus on solely one of the factors or measures (benchmarks) to collect in-depth information.

4. Further study should include additional data collection methods, such as field observations, personal interviews, site visits, and historical data in addition to self-administered questionnaires to gain detailed information on the benchmarking measures.

5. Development of additional questions may provide further understanding of

each benchmarking measure.

6. Development of additional benchmarking measures may provide new areas for the benchmarking study in state park systems.

7. Based on the results of the cluster-analysis in this study, future benchmarking studies could be conducted within each cluster to establish the benchmarks of each cluster.

8. Future benchmarking studies may be conducted across all the 50 state park systems to discover the benchmarks for the entire 50 state park systems.

9. Future benchmarking studies may be conducted beyond state park systems. The benchmarking partners could be the National Park Service, non-governmental agencies, or private businesses that demonstrate superior performances.

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APPENDICES

APPENDIX A

Oklahoma State University
Institutional Review Board

Protocol Expires: 7/5/2005

Date: Monday, July 12, 2004 IRB Application No ED04117

Proposal Title: Evaluation of Oklahoma State Park System (Oklahoma State Park Master Plan)

Principal Investigator(s):

Yating Liang ✓
015 North Cordell
Stillwater, OK 74078

Lowell Caneday
015 N. Cordell
Stillwater, OK 74078

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact me in 415 Whitehurst (phone: 405-744-5700, colson@okstate.edu).

Sincerely,

Carol Olson

Carol Olson, Chair
Institutional Review Board

APPENDIX B

Cover Letter for Internal Survey with Oklahoma Tourism and Recreation Department

This is an email message

June 21, 2004

Dear members of Oklahoma Tourism and Recreation Department,

As part of Evaluation of Oklahoma State Park System (Oklahoma State Park Master Plan) project, we are conducting a benchmarking study of Oklahoma state park systems. We designed a questionnaire to gain input from staff of Oklahoma Tourism and Recreation Department on benchmarking measures and benchmarking partners.

Through a Delphi study with members of the National Association of State Park Directors, factors have been identified to be used in a benchmarking study of state parks. For the benchmarking study with Oklahoma state parks, we now have two options:

(1) Conduct a system-wide benchmarking study that includes all the identified categories. The information that can be gained from each category will be limited to two or three markers for each factor.
(2) The other option is to choose two or three of the factors on which to measure the benchmarks. With this option, we can ask more specific and in-depth information for each factor.

With this in mind, please take a few moments to respond to the questions in the questionnaire. It will take about ten minutes to complete the questionnaire. Your participation in this portion of the study is voluntary, but vital to the project. We will not ask for any information that will personally identify you. This survey required approval by the Oklahoma State University Institutional Review Board. If you have any questions regarding this research, you may contact the office of the Institutional Review Board at Oklahoma State University (405-744-5700).

Please return the questionnaire to yating@okstate.edu by July 10th, 2004 by email. If you have any questions concerning the questionnaire or the study, please contact: Lowell Caneday at lowell.caneday@okstate.edu or call 405-744-5503 or Yating Liang at yating@okstate.edu or call 405-744-3068.

Sincerely

Yating Liang

APPENDIX C

Internal Survey with Oklahoma Tourism and Recreation Department

1. Please choose ONLY ONE of the following statements (please check):

(20) ☐ A. We should conduct a system-wide benchmarking study that includes all the factors (Table 1).

(16) ☐ B. We should choose two or three of the factors to conduct the benchmarking study. This will allow for more in-depth examination of the chosen factors.

Table 1

Major factors	**Specification**
Financial consideration	state appropriations, revenue earned, operating budget, capital budget
Concessionaries	service quality, net profit, existing performance objectives
Marketing/Public Service	visitor satisfaction, response time, communication with all constituents, including people with special needs (disability, different languages , etc), educational/interpretive programs, efficiency/effectiveness of marketing efforts
Maintenance	backlog, budgets, level of services, tracking system
Planning	system-wide and park-specific master plan and resource management plan, use of management models, implementation and on-going review of plans
Personnel	compensation, job security, qualifications and credentials, professional development, ratio of staff to visitors, and ratio of front-line staff to administrative staff
Stewardship	resource inventory, monitoring and assessment system, compliance with environmental regulations, protection/preservation
Constituents (researchers' input)	response to societal trends, inclusion of underrepresented minorities in visitation, ADA compliance, equity of service, volunteers
If you had one other major factor (including specifications) against which you would like to benchmark, please write in the space on the right side.	

If you choose Option A, Please *skip question 2*, and *go to question 3*.

If you choose Option B, please *continue with question 2*.

2. Please rank ONLY TOP THREE categories that you think should be included in benchmarking study (1 being the most important category). If there are specific factors that are not included in Table One in the corresponding TOP THREE categories, please list them in the last column.

Rank	**Categories**	**Additional specific factors**
1.50 (8)	Financial	
3.00 (1)	Concessionaries	
2.00 (4)	Marketing/Public Service	
1.80 (10)	Maintenance	
2.00 (7)	Planning	
2.29 (7)	Personnel	
2.13 (8)	Stewardship	
3.00 (1)	Constituents (researcher's input)	
2.00 (1)	Others (please name one)	**Education/Interpretation**

3. For benchmarking partners (whom the Oklahoma State Parks system should benchmark against), a factor analysis has been done based on many state parks demographics. Both state parks systems that are *similar and dissimilar* to the Oklahoma State Park system were identified. Please choose ONLY ONE of the following statements (please check).

(17) ☐ A. We should choose state parks systems that are similar to Oklahoma State Parks system to benchmark against.

(7) ☐ B. We should choose state parks systems that are dissimilar to Oklahoma State Parks system to benchmark against.

4. Please name ONE state park system that you think Oklahoma State Parks system should use in the benchmarking study and provide your RATIONALE.

Thank you for your participation!

Please return the questionnaire to yating@okstate.edu

APPENDIX D

Cover Letter for Benchmarking Survey

September 15, 2004

Dear Director (Director's name of the chosen state park system),

As indicated in an earlier letter of invitation from Secretary Taylor of the Oklahoma Department of Commerce and Tourism, your state parks system has been invited to serve as one of six benchmarking partners for the Oklahoma State Parks system. This is the first benchmarking study on state parks systems. There are several benefits for your park system to participate in this benchmarking study. First, you will be able to gain knowledge and learn from other state parks who will participate in this benchmarking study. Second, through this benchmarking study, you will gain new insights about your own business operations. Third, we will share the benchmarking process with you, which you will be able apply in future benchmarking projects of your own. Fourth, we will share the benchmarking process and benchmarking results with all of our benchmarking partners.

We would like to invite you to participate in this study as one of benchmarking partners for the Oklahoma State Parks system. I will contact you through telephone in a week to confirm your participation in this project.

Included is a self-administered questionnaire with a self-addressed envelope for returning the completed questionnaire. Possible on-site visits to your state parks or telephone interviews may follow. If you have any questions, please contact:

- Lowell Caneday at lowell.caneday@okstate.edu or call 405-744-5503 or
- Yating Liang at yating.liang@okstate.edu or call 405-744-5507.

Your participation is voluntary and extremely vital to the project. The information you provide will be utilized for this project only.

This study required approval by the Oklahoma State University Institutional Review Board (IRB). If you have any questions regarding this research or for information on subjects' rights, you may contact: Dr. Carol Olson, 415 Whitehurst, Oklahoma State University, Stillwater, OK 74078 (405-744-1676).

Sincerely,

Yating Liang

Ph.D. Candidate

Oklahoma State University

APPENDIX E

OSU

Oklahoma Tourism and Recreation Department

Oklahoma State Parks, a division of the Oklahoma Tourism and Recreation Department, has contracted with Oklahoma State University to conduct a benchmarking study of Oklahoma State Parks. You have been invited by Kathy Taylor, Secretary of the Department of Commerce and Tourism, to participate in this benchmarking. Your participation is the basis on which benchmarking can occur.

Please complete the questionnaire you received in the mail or download the questionnaire components below. Your responses should be based upon your current operations in your department of state parks. You may find it useful to review the sections, distinguished by color-coded paper or by file title, and choose to have staff complete the respective portions of the questionnaire. Then, upon completion of the entire questionnaire, collect the completed document. The completed questionnaire should be mailed in the enclosed envelope to the address below. You may also choose to respond electronically utilizing the Word document. ***Please return the completed questionnaire by October, 8, 2004***. As a benchmarking partner, you will receive a report early in 2005 of the findings of this benchmarking study.

Note: Although the questionnaire may look a little bit lengthy, but each section is only one or two pages in length. The majority of the questions offer multiple choices and can easily be "checked" in an appropriate box. The completed answers for each question are extremely important to the benchmarking findings of the study. We truly appreciate your time in completing the questionnaire!

Factor 1: Financial support .....Ivory
Factor 2: Concessionaires……...Canary
Factor 3: Marketing and public information ……Goldenrod
Factor 4: Maintenance ……..Salmon
Factor 5: Planning ……Pink
Factor 6: Public Involvement and constituent understanding……Orchid
Factor 7: Staffing and personnel…… Blue
Factor 8: Stewardship……...Green

Please complete the questionnaire by October 8 for return to Oklahoma State University

Factor 1: Financial support

1. Approximately what percentage of the operating budget is allocated for personnel (salaries and employees' fringe benefits)?

	Less than 50%
	50% to 60%
	60% to 70%
	More than 70%

2. What funding sources are presently utilized to generate your capital funds? (Check all that apply.) If a particular funding source is utilized, approximately what percentage of capital funds is generated from that source?

	Statewide bond issue	% of capital funds
	A dedicated revenue source	% of capital funds
	General state appropriations	% of capital funds
	Other (please specify):	% of capital funds

3. Does your department or division have a long-range plan for capital expenditures?

	Yes – go to question 4
	No – go to question 7
	Not sure – go to question 7

4. If your department or division does have a capital expenditure long range plan, how is it generated or developed?

5. If your department or division does have a capital expenditure long range plan, how are priorities for expenditure determined?

6. Are your allocations and expenditures for capital improvements linked to that plan (Do actual expenditures match reasonably well with your plan)?

	Yes
	No – factors other than our plan drive budget decisions for capital improvements.
	Not sure

7. What are the approximate percentages of each following category in the capital expenditures?

	Repair of existing facilities and infrastructure	% of capital expenditures
	Environmental compliance and infrastructure	% of capital expenditures
	New construction and development	% of capital expenditures
	Others	% of capital expenditures

Please identify the name and phone number of a contact person from whom we can get further information about your Department's financial support.

Name	
Phone number	

If you have any additional comments on this section, please provide them here.

Please complete the questionnaire by October 8 for return to Oklahoma State University

Factor 2: Concessionaires

1. Does your department or division utilize a standard contract for concessionaires?

	Yes
	No
	Not sure

2. Does your department or division utilize a uniform percentage of gross revenues to be paid as a concessionaire fee?

	Yes
	No
	Not sure

3. What is the approximate percentage of gross revenues paid by your concessionaires as a concessionaire fee?

	Less than 2%
	2% to 4%
	4% to 6%
	6% to 8%
	More than 8%

4. Does your department or division utilize a competitive bid process in determination of fees paid by your concessionaires?

	Yes
	No
	Not sure

5. Does your department or division have specific performance objectives for the concessionaire contractors?

	Yes
	No
	Not sure

6. Are concessionaire contractors evaluated for quality of service?

	Yes – If so, please answer question 7.
	No – If not, please go on to question 8.
	Not sure – If unsure, please go on to question 8.

7. If so, how frequently do these evaluations occur?

	Annually, regardless of contract length
	Every five years, regardless of contract length
	Only upon renewal or just prior to renewal date

8. What is the maximum length of contract with concessionaires?

	1 year
	5 years
	10 years
	More than 10 years
	Other (specify):

9. Do you use a feasibility analysis study to determine the utilization of funds required or generated by concessionaires?

	Yes
	No
	Not sure

10. What are the approximate percentages of concessionaire facilities installed and owned by state or by the concessionaires?

%	Installed and owned by the state
%	Installed and owned by the concessionaires themselves

11. What are the numbers of the following properties being operated under concession contracts?

	State parks (entire state park is under concession contracts)
	Lodges
	Cabins
	Golf Course
	Campgrounds
	Others (please specify)

Please identify the name and phone number of a contact person from whom we can get further information about your Department's concessionaire contracts and operations.

Name	
Phone number	

If you have any additional comments on this section, please provide them here._____

Please complete the questionnaire by October 8 for return to Oklahoma State University

Factor 3: Marketing and public information

1. What is the approximate annual budget for marketing state parks?

2. Of this total marketing budget, please indicate all the sources of funds that are available and utilized for marketing. (Check all that apply.) If a particular funding source is utilized, approximately what percentage of your marketing is provided from that source?

	State appropriated budget	% of marketing budget
	Friends groups/associations	% of marketing budget
	Concessionaires	% of marketing budget
	Other (please specify):	% of marketing budget

3. Does your department or division have a marketing plan?

	Yes – Go to question 4.
	No – Go to question 6.
	Not sure – Go to question 6.

4. Who actually develops the marketing plan?

	In-house staff
	Another department or division of the state
	Contracted or out-sourced

5. How is the effectiveness of your marketing plan evaluated?

	Conversion studies
	Visitor satisfaction studies
	Other method (please specify):
	Not sure

6. What media do you use to market state parks? (Check all apply)

	Newspaper
	Magazine
	TV
	Radio
	Websites
	Others (specify)

7. Does your department or division conduct customer surveys to assess visitor satisfaction?

	Yes – Go to question 8.
	No – Go to question 9.
	Not sure – Go to question 9.

8. If so, how frequently do these surveys occur?

	Annually or more frequently than once per year
	Every five years or more frequently, but not annually
	Irregularly
	Not sure

9. Is there an opportunity for public comment (complaint, suggestion, or compliment) regarding services and facilities?

	Yes – please answer question 10.
	No – please go on to question 12.
	Not sure – please go on to question 12.

10. What methods of communicating these comments are provided for the public? (Please check all that apply.)

	Email – from the Webpage
	Telephone number
	Mailing address
	Comment cards
	Suggestion box
	Other method (please specify):

11. What state park staff member responds to those comments? (Check all that apply.)

	The state park director
	State park managers
	Park staff
	A public relations specialist
	Other (please specify):

12. Does the department or division utilize a reservation system for campsites, cabins, shelters or other facilities?

	Yes – Go to question 13.
	No – Go to question 17.
	Not sure – Go to question 17.

13. If so, who actually operates that reservation service?

	In-house staff
	Another department or division of the state
	Contracted or out-sourced

14. How far in advance do you accept reservations for the following facilities?

Months	For campsites
Months	Group camps
Months	Cabins
Months	Lodges
Months	Shelters
Months	Others (please specify)

15. What is the basis or rationale for the decision on length of time from reservation request to actual use? (Check all that apply.)

	Types of Facilities
	Length of Stay
	Others (please specify):

16. What medium of communication is available for public access to use this reservation system? (Please check all that apply.)

	Electronic – on-line via a Webpage
	Telephone
	Mail
	Other (please specify):

17. Does the department or division provide educational or interpretive programs for the visitor?

	Yes – Please answer question 18.
	No – Go on to the next section on Maintenance.
	Not sure – Go on to the next section on Maintenance.

18. If so, what programmatic themes are included in these educational programs? (Check all that apply.)

- ☐ Natural history (wildlife, botany, bird-watching, etc.)
- ☐ Cultural history (the role of humans in the area)
- ☐ Park use (proper use of the environment)
- ☐ Park operations (politics, funding, and mission of state parks)
- ☐ Environmental education (structured curriculum, i.e., WET, WILD, PLT)
- ☐ Outdoor skills
- ☐ Other (please specify):

19. Approximately how many properties managed by your department or division have programming or interpretive staff?

☐ Number of properties

20. Approximately what percentage of your department's or division's budget is dedicated to programming or interpretive staff?

☐ Percentage of budget

Please identify the name and phone number of a contact person from whom we can get further information about your Department's marketing and public relations efforts.

Name	
Phone number	

If you have any additional comments on this section, please provide them here._____

Please complete the questionnaire by October 8 for return to Oklahoma State University

Factor 4: Maintenance

1. Does your department or division have a maintenance plan for **each property**?

	Yes – if so, please skip to question 3
	No – if not, please answer the next question
	Not sure

2. Approximately what percentages of the properties in your department or division have a specific maintenance plan?

	Less than 50%
	More than 50%
	Not sure

3. Does your department or division have a system for tracking the status of maintenance projects (i.e., completed projects, next scheduled projects, backlog of projects)?

	Yes – if yes, please answer question 4
	No – if no, please go to question 5
	Not sure – please go to question 5

4. If your department or division has a system for tracking maintenance projects, what is the medium in which that system operates? (Check all that apply.)

	Hard copy (paper)
	Electronic records, accessible to park managers
	Electronic records, NOT accessible to park managers
	Not sure

5. What is the approximate dollar value of your backlog of maintenance projects at this time?

6. What is the approximate number of years of accumulated backlog of maintenance projects currently on the books?

7. Does your department or division apply national or industry standards as the basis for maintenance practices? (For example, do you utilize the 'park maintenance standards' recommended by NRPA?)

☐	Yes
☐	No
☐	Not sure

8. What is the source of funding for general maintenance? (check all apply)

☐	General appropriations
☐	Capital funding
☐	Endowed funds
☐	Others (please specify)

9. What types of work are typically included in the maintenance program other than the capital request? (Check all apply)

☐	Daily cleaning of restrooms
☐	Trash pick-up
☐	Fencing
☐	Trail work
☐	Painting
☐	Sign work
☐	Grounds maintenance: mowing, weed cutting & removal, and weed spraying
☐	Others

Please identify the name and phone number of a contact person from whom we can get further information about your Department's maintenance program.

Name	
Phone number	

If you have any additional comments on this section, please provide them here._____

Please complete the questionnaire by October 8 for return to Oklahoma State University

Factor 5: Planning

1. Does your department or division have a master plan for the entire agency?

	Yes – if yes, please answer question 2
	No – if no, please go to question 7
	Not sure – please go to question 7

2. Who prepares the master plan for your department or division?

	In-house staff
	Another department or division within the state system
	Contracted or out-sourced

3. Does the master plan process utilized for your department or division include an opportunity for public input and comment?

	Yes
	No
	Not sure

4. Please identify those components from the following list that are included in your agency's master plan. (Check all that apply)

	Business plan for each property
	Capital improvement plan
	Comprehensive land acquisition plan
	Development plan for each property
	Marketing plan
	Resource management plan
	Risk management plan
	Staff/employee development plan
	Other (please specify):

5. How frequently do you update your master plans?

	Annually
	Every five years
	Other (please specify):

6. Do you have an action plan for the implementation of the master plan?

	Yes
	No
	Not sure

7. Does your Department have standardized facility designs, signage guidelines or appearance regulations that apply to all park facilities in the system?

	Yes
	No
	Not sure

Please identify the name and phone number of a contact person from whom we can get further information about your Department's planning.

Name	
Phone number	

If you have any additional comments on this section, please provide them here._____

Please complete the questionnaire by October 8 for return to Oklahoma State University

Factor 6: Public involvement and constituent understanding

1. Does your department or division utilize "friends" groups or non-profit associations as partners and advocates for properties?

	Yes – If so, go on to question 2.
	No – If not, go on to question 4.
	Not sure – If unsure, go on to question 4.

2. If so, what management assistance is provided by volunteer groups? (Check all that apply.)

	Adopt-a-park program
	Volunteer staffing
	Clean-up days (litter pickup, mowing, road-side and campsite clean-up)
	Campground hosts
	Gift shop operation
	Program delivery (i.e., nature hikes, bird watching, campfire programs)
	Other (please specify):

3. Does your agency or department provide training or orientation for these volunteers?

	Yes
	No
	Not sure

4. Does your agency or department have a process by which under-served populations are provided a voice in management decisions?

	Yes
	No
	Not sure

5. Does your agency or department have professional staff members assigned to review accessibility of properties, programs and services for persons with disabilities?

	Yes – Please answer question 6.
	No – Please go on to question 7.
	Not sure – Please go on to question 7.

6. How often does this review of accessibility occur within your department or division?

- [ ] As a routine maintenance practice (weekly or monthly)
- [ ] Annually
- [ ] About every five years
- [ ] Only upon complaint

7. What is the percentage of your state parks properties ADA accessible or in compliance with current ADA standards?

[ ] Approximate percentage pf properties that are ADA compliant

8. Is your website accessible to people with disabilities?

- [ ] Yes
- [ ] No
- [ ] Not sure

9. Do you have business phone lines for people with disabilities?

- [ ] Yes
- [ ] No
- [ ] Not sure

10. Does your department or division have a State Park Foundation?

- [ ] Yes, please go to question 11
- [ ] No, please go to question 12
- [ ] Not sure, please go to question 12

11. If yes, does the Department supply staff time for Foundation initiatives?

- [ ] Yes
- [ ] No
- [ ] Not sure

12. Using the following scale, please rate the support your department or division receives from citizen advocacy groups.

	Outstanding – could not be better!
	Very good – but can improve
	Good – present, active, but only when stimulated by the department/division
	Mediocre – present, but generally stagnant
	Non-existent

13. Briefly describe the process by which your department or division established and formalized these citizen advocacy groups.

Please identify the name and phone number of a contact person from whom we can get further information about your department's activities related to topics of public involvement and constituent understanding.

Name	
Phone number	

If you have any additional comments on this section, please provide them here._____

Please complete the questionnaire by October 8 for return to Oklahoma State University

Factor 7: Staffing and Personnel

1. Are the employees in the department or division considered to be members of a state civil service system linked to job classification?

	Yes – Please go to question 2.
	No – Please go to question 5.
	Not sure – Please go to question 5.

2. Approximately what percentage of employees in the department or division is in that state civil service system?

	Less than 50%
	50% to 75%
	More than 75%
	Not sure

3. Are those employees who are NOT in the civil service system limited to certain functions or areas of employment?

	Yes – Please answer question 4.
	No – Please go on to question 5.
	Not sure – Please go on to question 5.

4. If so, what are these limitations? (Check all that apply)

	Lodge operations
	Golf course operations
	Part-time or temporary positions
	Other (please specify):

5. What is the approximate annual turnover rate, not including retirements, among professional field staff?

	Less than 5%
	5% to 10%
	More than 10%
	Not sure

6. Approximately how many employees are certified as law enforcement personnel?

- [ ] No employees are certified as law enforcement personnel
- [ ] 25 or fewer
- [ ] 25 to 50
- [ ] More than 50 employees
- [ ] Not sure

7. To whom do law enforcement personnel report?

- [ ] Park manager
- [ ] Law enforcement personnel
- [ ] Others (please specify)

8. For those rangers and management personnel who are certified as law enforcement personnel, are there expectations that these personnel also serve in interpretive roles?

- [ ] Yes
- [ ] No
- [ ] Not sure

9. What entry level qualifications are required of personnel serving as naturalists, interpreters or environmental educators? (Check all that apply)

- [ ] Baccalaureate degree in science or history
- [ ] Baccalaureate degree in parks and recreation
- [ ] Baccalaureate degree without specifically required major
- [ ] Teaching certificate (as required for public school teachers)
- [ ] Certification through the National Association for Interpretation
- [ ] Certification in specialized programs (i.e., WET, WILD, PLT)
- [ ] There are no specific requirements
- [ ] Other (please specify):

10. What are the minimum qualifications are required for park managers? (Check all apply)

- [ ] Baccalaureate degree in law enforcement
- [ ] Baccalaureate degree in parks and recreation or closely related field
- [ ] Baccalaureate degree without specifically required major
- [ ] No specific academic requirements, but experience is required
- [ ] There are no specific requirements
- [ ] Other (please specify):

11. Does the department or division have a career development program for employees?

- [ ] Yes – Please answer question 11.
- [ ] No – Please go on to question 14.
- [ ] Not sure – Please go on to question 14.

12. If so, what positions are included in this career development program?

13. If so, what topics are included in that career development program? (Check all that apply.)

- [ ] Finance and revenue management
- [ ] Human resources – personnel management, development, evaluation
- [ ] Interpretive services
- [ ] Law and legal issues
- [ ] Leadership development
- [ ] OSHA compliance – first aid, CPR, heat stress, blood-borne pathogens
- [ ] Playground safety and inspection
- [ ] Resource management – historic, natural, cultural
- [ ] Risk management
- [ ] Security and law enforcement
- [ ] Technical topics: HVAC, waste management, electrical, chemical application
- [ ] Volunteer services – recruiting, training, managing, rewarding
- [ ] Other topic (Please specify):

14. Does the department or division have a trainee program?

- [ ] Yes – Please answer question 15.
- [ ] No – Please go on to the next section on stewardship.
- [ ] Not sure – Please go on to the next section on stewardship.

15. If so, what positions are included in this career development program?

Please identify the name and phone number of a contact person from whom we can get further information about your department's activities related to topics of staffing, personnel and staff development.

Name	
Phone number	

If you have any additional comments on this section, please provide them here._____

Please complete the questionnaire by October 8 for return to Oklahoma State University

Factor 8: Stewardship

1. Does your department or division regularly incorporate the following management models into decision processes? (Check all apply)

	Recreation Opportunity Spectrum
	Limits of Acceptable Change
	Carrying capacity
	Visitor Experience and Resource Protection
	None of above
	Others (please specify):

2. Does your department or division have a baseline inventory of natural and cultural resources included in the state properties?

	Yes – Please answer question 3.
	No – Please go on to question 4.
	Not sure – Please go on to question 4.

3. What is the date of the most recent inventory of natural and cultural resources?

4. How much property has your department purchased in the last two years?

	Number of acres purchased in past two years

5. Does your department or division manage properties that are presently available for public use and/or may not be made available for development?

	Yes
	No
	Not sure

6. If so, approximately how many acres are not presently available for public use or development?

	Number of acres not available for public use or development

7. Does your department or division have a monitoring process to determine level of care necessary to protect or enhance those resources?

	Yes
	No
	Not sure

8. Is the department or division required to prepare a state-level 'environmental impact assessment' or 'environmental impact statement' prior to activities that may change use of properties?

	Yes
	No
	Not sure

9. Which of the following state officials are included in decisions (when appropriate) related to management of properties in your department or division? (Check all that apply.)

	State Historic Preservation Officer (SHPO)
	State biologist
	State fish and game specialist
	State geographer (or State GIS officer)
	Other state official (please specify):

10. Does your department or division maintain a partnership agreement or other working agreement with non-government advocacy organizations (i.e., Trust for Public Lands, The Nature Conservancy, or the Farmland Trust)?

	Yes
	No
	Not sure

11. Please rank the top three factors on which your department or division bases decisions to develop facilities. This might include such factors as 'resource conservation,' 'visitor demand,' 'facility appearance,' 'political pressure,' and others. (1 being the most important priority, and being the least important priority)

1	
2	
3	

12. What is the most pressing stewardship/natural resource issue facing your Department at this time?

13. Does your Department have any resource conservation or stewardship efforts/projects underway? If so, please explain briefly.

Please identify the name and phone number of a contact person from whom we can get further information about your department's activities related to topics of stewardship and conservation.

Name	
Phone number	

If you have any additional comments on this section, please provide them here._____

VITA

Yating Liang

Candidate for the Degree of

Doctor of Philosophy

Thesis: BENCHMARKING THEORY APPLIED TO STATE PARKS: AN EXPLORATORY STUDY

Major Field: Health, Leisure and Human Performance

Biographical:

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