

Lindenwood University

Digital Commons@Lindenwood University

Theses

Theses & Dissertations

2000

Influencing the Growth and Expansion of Alternative Transportation for St. Charles County, Missouri

Elizabeth A. Johnson

Follow this and additional works at: <https://digitalcommons.lindenwood.edu/theses>



Part of the [Business and Corporate Communications Commons](#)

**INFLUENCING THE GROWTH AND EXPANSION OF ALTERNATIVE
TRANSPORTATION FOR ST. CHARLES COUNTY, MISSOURI**

Elizabeth A. Johnson, P. E., BSCE

**An Abstract Presented to the Faculty of the Graduate School of Lindenwood University in
Fulfillment of the Requirements for the Degree in Master of Art for Corporate Communications.**

2000

ABSTRACT

This thesis will focus on the study of communication, leadership and Total Quality Management. The case study establishes a link between these concepts and their application, directed at influencing of the growth and expansion of alternative transportation for St. Charles County, Missouri.

The subject of TQM is a common point of discussion within the engineering and construction industry, with numerous technical publications written on the subject. The primary concern within the industry is the lack of implementation for continuous improvement and customer satisfaction. Documentation on resistance to change describes why the process of TQM is beneficial, but the issue of lack of implementation persists as the participants of an organization view TQM as a program, not a corporate lifestyle transformation.

This thesis explores the application of military leadership tools used to complete a mission, through iterative and cyclic processes, in relation to the challenges of influencing a change in an organization or system. In this case, the organization is the St. Charles County community and the system is the growth and expansion of alternative transportation. The tools are dependent on the communication ability of the leader to advocate the process.

The framework for implementing the TQM process is the Army's Eight Troop Leading Procedures and the After Action Review. The research of human behavior, public relations, Situational Leadership, organizational development, addiction, quality systems, Statistical Process Control, etc. support the communication process of influencing the application of TQM principles through these practical leadership tools.

The results of the thesis are qualitative, and subject to perception and interpretation of the reader. This does not have an adverse impact on the theory of applying the military leadership tools for implementing TQM, other than continued resistance to change. The human nature aspect of the process requires a vision for transformation as a necessity for continuous improvement and customer satisfaction in an organization or system.

INFLUENCING THE GROWTH AND EXPANSION OF ALTERNATIVE
TRANSPORTATION FOR ST. CHARLES COUNTY, MISSOURI

Elizabeth A. Johnson, P. E., BSCE



A Culminating Project Presented to the Faculty of the Graduate School of Lindenwood University in
Fulfillment of the Requirements for the Degree in Master of Art for Corporate Communications.

COMMITTEE IN CHARGE OF CANDIDACY:

Professor Michael Castro, Chairperson and Advisor

Adjunct Professor Michael Kramer

Adjunct Assistant Professor Thomas Dehner

Dedicated to:

my parents Orville and Karen;

my sister Amy; and

my friends Mary Jane, Julie, Linda Bell, Jane, Cathy Lew, Tammie, Denise, Janet, and Jennifer;

who have each provided inspiration and support for my personal and career growth.

Acknowledgements to:

United States Army Reserves - Officer Corps, Engineer Branch, Fort Leonard Wood, MO

Gerald W. Chase, PhD, Professor (Retired), Iowa State University, Ames, IA

Jeffrey S. Russel, P.E., PhD, Editor, Journal of Management and Leadership in Engineering,
University of Wisconsin, Madison, WI

James Phillips, Director, Community Council of St. Charles County, St. Charles, MO

Kevin F. Kast, President, SSM Health Care, St. Joseph Health Center, St. Charles, MO

Table of Contents

| | |
|--|-----|
| List of Figures | vi |
| List of Exhibits | vii |
| I. Introduction | 1 |
| Communication | 1 |
| Leadership | 3 |
| Total Quality Management | 6 |
| Case Study - Alternative Transportation for St. Charles City | 10 |
| Summary | 14 |
| II. Literature Review | 15 |
| III. Selective Review and Evaluation of Research | 38 |
| Transformation | 38 |
| Leadership | 39 |
| Behavior and Motivation | 41 |
| Perception | 43 |
| Action/ Direction | 44 |
| Culture - Beliefs, Values and Norms | 45 |
| Vision | 47 |
| Communication | 48 |
| Total Quality Management | 50 |
| Strategy/ Structure | 51 |
| People | 54 |
| IV. Results | 56 |
| Eight Troop Leading Procedures | 57 |
| Candidate for Master of Science | 59 |
| After Action Review | 66 |

List of Figures

| | | |
|----------|--|----|
| Figure 1 | Example Use of the Army's Eight Troop Leading Procedures | 4 |
| Figure 2 | Integrated Cycle | 14 |
| Figure 3 | The structure of TQM ... A Model..... | 21 |
| Figure 4 | Situational Leadership® for Transformational Model (SLT)..... | 52 |
| Figure 5 | The Implementation of TQM though the TLPs | 58 |

List of Exhibits

| | | |
|-----------|--|----|
| Exhibit A | Community Transit Meeting Attendance, March 2000 | 76 |
| Exhibit B | Flowchart/ Timeline of Networking..... | 77 |
| Exhibit C | Typical Meeting Agenda | 78 |
| Exhibit D | Proposal for Consultation | 79 |
| Exhibit E | Plan of Action | 80 |

Chapter 1

INTRODUCTION

The intent of this Culminating Project is to establish a link between the principles of Communication, Leadership, and Total Quality Management for the purpose of influencing positive change in a system. Each process is cyclical and iterative. A cycle is series of events that return to the beginning, to begin again. An iteration means that new information can be provided for the situation and may affect or change decisions that have already been made. The communication process delivers information from one source to another. Leadership is a process that influences others. The process of continuous improvement and customer satisfaction is Total Quality Management. Each independent process has limitations, but the effective combination of these processes can increase the opportunity for success to influence positive change.

None of these processes would be relevant without a system to influence. The study for this paper is the growth and expansion of alternative transportation within St. Charles County, Missouri. The focus is on public transit (buses) rather than mass transit (trains). The goal of the project is to identify and implement opportunities for the existing transit services for the January 2002 fiscal year budget. The key to success is creating a focus group to developing a Strategic Plan for review of the alternative transportation opportunities. The following sections discuss each principle in greater detail. The process has worked during the development of this paper, which changed the original focus from the City of St Charles to focus on the entire St. Charles County.

COMMUNICATION

Communication is a constant process that requires several methods. Public schools are required to teach reading and writing. Many schools offer speech classes, even though it is learned as a child. Listening, however, is an all-together different matter. A specific curriculum for listening is not available in a classroom setting and is often overlooked as a form of communication. Listening is in fact an vital part of the communication process, but too often, in conversation, we are left thinking:

I know you think you understand what you thought I said, but I am not sure that what you heard is what I said.

Seminars are available for individuals to improve listening skills, but the ones who need to improve their skills the most are often unaware even of the need. Effective communication is a learned skill that requires attention to every aspect - Reading, Writing, Speaking, and Listening. A group discussion about the results of a project or situation zeros in on speaking and listening. The manner in which the issues are presented and recorded makes a difference in how someone learns from the experience.

The United States Army recognizes the importance of communicating about our experiences in order to learn from that experience. The leadership uses the method of an After Action Review (AAR) in order to identify lessons learned about a completed mission. In a training scenario, an AAR may be conducted at any time if necessary, to enhance the unit training. The purpose of the AAR is to capture the lessons learned in order to identify strengths and weaknesses of the team. There are several guidelines to follow that have proven to be a successful means for interpreting the unit's strengths and weaknesses. The point is to discuss which tasks to sustain and which improve proficiency. A unit would not simply stop training on a critical task, like putting on a gas mask, just because they received a "GO" on an evaluation. There are some tasks that will always receive sustainment training, while others are given priority and trained for improvement.

An after-action review (AAR) is a professional discussion of an event, focused on performance standards, that enables soldiers to discover for themselves what happened, why it happened, and how to sustain strengths and improve on weaknesses. It is a tool a leader or a unit can use to get maximum benefit from every mission or task (TC 25-20).

The intent for the facilitator of an AAR is to establish insight and provide feedback on critical details on the training event: he or she asks leading questions like "What happened next," and prevent the soldier's discussions from becoming a critique and finger pointing session. The best

way to get soldiers to speak and listen to each other is to ask questions that require more than yes/no answers. A positive learning opportunity is the result of an effective AAR.

In every organization, communication is obviously a necessity. Resistance to change is a result of human behavior. Communication within an organization can be described as internal public relations. "This (public relations) is not rocket science, it is more difficult than that because there is no correct answer," (Dehner 1998). Many are advocates of new ideas, but few are able to build consensus. Exploration of the idea that perception is reality is necessary, and perception will not change until others accept new information as truth. Research of the mind-set, trends and culture of a group is required in order to identify the perception which controls the attitudes, opinions and beliefs of the people concerned. "Public opinion expresses beliefs based not necessarily on facts, but on perceptions and evaluations of events, persons, institutions or products," (Newsom 186). It is necessary to research the mind-set, trends and culture of an organization in order to identify perception that controls attitudes, opinions and beliefs.

LEADERSHIP

The United States Army is an organization that develops leaders as required for their overall mission. "Leadership is the process of influencing others to accomplish the mission by providing purpose, direction and motivation," (FM 22-100). Leadership is established by four primary factors: the Leader, the Led, the Situation and Communication. The principles of leadership are communicated through the Army's Troop Leading Procedures (TLPs), an eight-step process that becomes integrated with any task to be accomplished. The "Task, Condition and Standard" for the TLPs is listed in Appendix B. The process is a continuing iteration based on the degree of knowledge and purpose. TLPs are the first step of any military mission, but are used in parallel ways through the various phases of the mission. The use of an After Action Review would be used following the completion of the mission to communicate with each other about the process. A simple example is shown in Figure 1 in which the objective is to feed a family a healthy meal in the same setting. The eight steps of the TLP process are noted on the left, with the corresponding stages in the development of dinner on the right.

| | |
|---|--|
| 1. Receive the Mission | Make Dinner |
| 2. Issue a Warning Order | Schedule Dinner for 7:00 pm, time now is 4:00 pm |
| 3. Make a Tentative Plan | Dinner will be hamburgers → Estimate Situation |
| 4. Initiate Movement | Go to grocery store for chips and soda |
| 5. Conduct Reconnaissance | Kids' friends are staying for dinner, spouse will be late, grill is broken |
| • Iteration # 1, Go back to Make a Tentative Plan | Change dinner to meatloaf, need fruit for snack since dinner will be late |
| 6. Complete the Plan | Dinner at 8:00 pm, two more people to feed, meatloaf instead, snack on fruit |
| 7. Issue Operations Order | Call kids in at 6:30 pm, delegate chores, send one to store for apples |
| 8. Supervise | Always |

Figure 1: Example Use of the Army's Eight Troop Leading Procedures

An AAR can be used by the leader (the person making the dinner), to evaluate this mission. The leading questions might be, "What was for dinner, Was it the original plan, How was the meal, What can be improved, What can be sustained, Was the mission successful?" Different families may have alternative perspectives of the same situation. The goal is to build consensus, through effective communication and leadership, about the outcome of the mission.

Warren Bennis is a leadership scholar that has written about the distinctions between management and leadership. A clear understanding between the differences improves the communication process. Bennis has written a provocative definition separating the two:

Leaders conquer the context - the volatile, turbulent, ambiguous surroundings that sometimes seem to conspire against us and will surely suffocate us if we let them - while managers surrender to it. The manager administrates; the leader

innovates. The manager is a copy; the leader is original. The manager maintains; the leader develops. The manager focuses on the systems and structure; the leader focuses on people. The manager asks how and when; the leader asks what and why. The manager has an eye on the bottom line; the leader has his eye on the horizon. The manager imitates; the leader originates. The manager accepts the status quo; the leader challenges it. ...Managers do things right; leaders do the right things (Hersey 7-8).

This definition can be further defined from the book Hope is Not a Method - What American Business Leaders can Learn from America's Army. "Management has to do with an organization's *processes* - performing them correctly and efficiently; leadership has to do with an organization's *purposes*," (Sullivan 43).

Peter Drucker devoted his life to writing and lecturing about management theories. He began writing in the 1930s, and has been considered often as a man before his time, with several books in his portfolio. Jack Beatty has summarized the majority of Drucker's theories in the book The World According to Peter Drucker. Although many of his ideas are relevant and used in today's corporations, there is no distinction between leadership and management in his theories.

Drucker begins with yet another of his dyads: the difference between doing the right thing and getting the right things done. The former is the standard of efficiency applied to manual work. The latter is the standard for effectiveness:

The effective executive gets the right things done (Beatty 124).

The reader should recall that Warren Bennis defined leadership as effective and management as efficient. One major concept that Drucker developed in 1954 is the concept of Management by Objective (MBO). "Basically, managing by objectives changes the job of the manager from supervising subordinates to setting with them objective measures and goals, leaving them to achieve the goals as they will," (Beatty 111). The concept would lead to "a nonauthoritarian workplace," (Beatty 113).

One debate against the theories of Management by Objective is by W. Edwards Deming, the guru of Total Quality Management. The following is Deming's debate:

W. Edwards Deming, the father of the 'quality revolution' in American business...thought MBO was hostile to quality because it was goal-focused, not product-focused: it dealt with the ends not means (Beatty 112).

The argument is that business cannot be based on quotas, but should be based on processes, the means to get the end result. The process, as defined earlier by Sullivan, is still management, but effective implementation of the process can be achieved through leadership and communication within the organization.

Based on the definition of MBO, Drucker has assumed that each employee knows his or her respective job. But as the situation changes from within the organization, the employees' ability and willingness to understand and implement the situation, changes as well. The management of change requires a complete understanding of the individual and the situation. "According to Situational Leadership, there is no one best way to influence people," (Hersey 190). Situational Leadership® relates effective leader behavior to employees' relationship and task behavior.

Drucker describes the manager - employee relationship as, "Managers can demand two things from workers: dedication to their jobs and willingness 'to accept change'," (Beatty 115). Typically, based on military theory, leaders never "demand" anything, they "command" respect in order to influence the soldier. The Army trains its leaders to follow to the Troop Leading Procedures, in which Step #5 - Make a Tentative Plan (with Estimate the Situation), is similar to Situational Leadership. In the distinction between management vs. leadership, military theory can be summed up with one phrase, "When in charge, be in charge" (Sullivan 39). Whether this is considered authoritarian or not, is based on the perception of the situation.

TOTAL QUALITY MANAGEMENT

"What is quality? Who is the judge of quality?" (Deming 3). Dr. W. Edwards Deming is the man most of the world associates with Total Quality Management. He asked these questions in his book Out of the Crisis. TQM is the process of continuous improvement and customer satisfaction. His work was a continuation from his mentor Walter Shewart. American corporations

dismissed his theories, so he set off to Japan in the 1950's and became an icon in the Japanese manufacturing and business world.

TQM is commonly used in construction and manufacturing, with varying degrees of success. It is the implementation of TQM that is difficult because it requires change management and strategic planning, each of which requires public relations with internal and external customers of the organization. It is successful when a group gets past the thoughts, "But this is the way we've always done this task," or, "We don't have time for all that planning because the deadline is next week." An organization must realize that total satisfaction does not just mean getting the final product to the consumer. Most employees' view TQM as just another program, to go down the tube in a few months. TQM is in fact a process to be accepted as part of the culture, corporate, private or otherwise.

Continuous improvement can be a goal for every activity, from processing an accounting form, to ordering an office luncheon, to finalizing a bid document for a large construction project. Many times, organizations forget that employees are also customers and improving internal methods may be as important as the external. According to research by Iowa State University on improving companies through TQM, "Areas identified as needing improvement included leadership, employee input to their work, cooperation between trades, and communication," (ASCE May/June 98).

The Associated General Contractors (AGC) of America, with the assistance of Iowa State University, have adopted TQM as a means to reduce project cost and schedule. Communication within the organization is seen as a vital part of the process.

Total Quality Management is a structured approach to improvement. It involves a strong commitment to two guiding principles: customer satisfaction and continuous improvement. TQM can be used by any organization, public or private, that provides a service or product to another. TQM goes well beyond the traditional limits of quality assurance and quality control. TQM requires the participation of the entire organization (AGC 15).

The concept of TQM began with Walter Shewart in 1931 from his book Economic Control of Quality of Manufacturing. He challenged the concept of the inspection-based approach to quality. Until this time, manufacturers inspected 100% of every part for defects. His theory used statistics to predict variation in the quality and determine if a system was in control through random sampling and statistical charting. Shewart describes the use of subgroups to simplify the process of elimination in finding - and ultimately solving - the root cause of a problem.

The ultimate objective is not only to detect trouble but also to find it. And such discovery naturally involves classification. The engineer who is successful in dividing his data initially into rational subgroups based upon rational hypothesis is therefore inherently better off in the long run than the one who is not thus successful (Wortman X-33).

In random sampling, a subgroup part is supposed to measure between plus or minus one-tenth of an inch ($\pm 1/10''$) of specification. If one sample is taken out of every one hundred produced, the statistics of that sample being within the tolerance indicates the quality of the process. An assembly may have a chronic problem, but if parts are subgrouped and samples are taken the ability to identify and solve the problem are increased. Analysis of the trends, or shifts in the data indicates if the system is running normally, or if there is an undesirable change in the process. This approach is known as Statistical Process Control (SPC) and is used throughout industry.

A complementary problem-solving tool is the concept of the Plan-Do-Check-Act (PDCA) cycle. Deming has given Shewart credit for concept, but Deming's name is associated with it from his work in Japan. The PDCA cycle is the basis of continuous improvement and each stage requires communication with customers. It is an iterative process similar to the Troop Leading Procedures. The Quality Council of Indiana has suggested that in each stage of the PDCA cycle, the following be observed:

PDCA Improvement Cycle Detail

1. PLAN - what could be the most important accomplishment of this team?
What changes might be desirable? What data is needed? Are new

observations needed? Does a test need to be devised? Decide how to use any observations that are scheduled.

2. DO - carry out the change or test decided upon, preferably on a small scale.
3. CHECK - observe the effects of the change of the test. In some cases, this step is called a study.
4. ACT - study the results. What did we learn? What can we predict from what we learned? What we learned from the change should lead to either (a) improvement of any, or all stages and (b) some activity to better satisfy the customer either internal, or external. The results may indicate that no change at all is needed, at least for now.
5. Repeat Step 1 with new knowledge accumulated.
6. Repeat Step 2 and so forth (Wortman VIII-3).

TQM is the result of applying problem solving techniques and communication. No matter what tool is used in the TQM process, the purpose of TQM is not to improve the process or business so that a job is eliminated; rather, the purpose is the following:

Improvement of quality transfers waste of man-hours and of machine-time into the manufacture of good product and better service. The result is a chain reaction - lower cost, better competitive position, happier people on the job, jobs, and more jobs (Deming 2).

This chain reaction can not only be applied to manufacturing, but also to service related industries.

Another guru in the subject of quality management is Dr. Joseph M. Juran. Juran developed the trilogy for the basis of success - Quality Planning, Quality Control, and Quality Improvement. "In fact, while the 'gurus of quality' disagree on a lot of things, there is a virtual consensus on the importance of planning," (Pyzdek 92). Juran's trilogy is effective with a comprehensive understanding of Statistical Process Control (SPC) as described previously. Juran has taken SPC to a higher level than Deming and requires significant education. The American

Society for Quality (ASQ) requires testing and certification for professionals to practice such methods. The reader should recall that Shewart, Deming's mentor, first derived SPC.

For public transit, SPC can be used to identify opportunities for improvement, with the consistent collection of data. Juran's SPC, along with Deming's PDCA cycle, is a recipe for success in the process of TQM. All these acronyms and circles of information can be overwhelming, but if the process is used effectively, the lay person will not be required to understand the process abstractly. If effective, the leadership will implement the process experientially and communicate the results of the process and the changes of the system will have a positive impact on the service or product provided.

There are many tools to picture the process for the lay person - flow charts, "fishbone" diagrams, matrix, "measles" charts, benchmarking, etc. These tools will be used and discussed in subsequent chapters of this paper. The purpose of these tools is to assist in identifying the "root cause" of a problem. Often, the symptom of a problem is addressed, but the underlying cause is not diagnosed. A medical metaphor calls it the "band-aide" approach. Root Cause Analysis is required for quality improvement to be successful. "A root cause usually is expressed in terms of the least common organizational, personal or activity denominator," (Pzydek 146).

CASE STUDY - ALTERNATIVE TRANSPORTATION FOR ST. CHARLES CITY

Alternative transportation is a "hot" topic throughout the United States. Many know it is necessary and beneficial, but the question remains, "How do we get people out of their cars, with a booming economy and no funding available?" Other communities that have effective transit systems can be used as a benchmark to develop ideas. St. Charles is currently looking into expansion of the existing bus system, but the City is at a stand still with limited money and resources available.

The City of St. Charles operates two public transit systems, the St. Charles Area Transit (SCAT) bus system and the Main Street Trolley. The current SCAT system (formally the Golden Age Express) supports mainly the elderly and handicapped population. As a result, many St. Charles residents have no alternative to cars as a means of travel. The Public Works Department

manages the SCAT system. SCAT runs four buses on a fixed-deviation route that travels Monday through Friday, 9:00 am - 3:00 pm, with the hub located at the O'Dell Senior Center on Fairgrounds Road. It deviates from the designated route to pick someone up if they call in advance. From a visual perspective, the buses almost always appear empty and do not operate during "normal" business hours, when employers could get the benefit of transporting the workforce. The system currently runs with a very limited marketing plan. A prospective client can only call the Public Works department and request a schedule to be mailed to their house, but no pro-active efforts are made to contact and inform prospective customers.

The Greater St. Charles Convention and Visitor's Bureau manages the Main Street Trolley. The Trolley primarily operates during the tourist season, with information provided by word of mouth through the Visitor's Center on Main Street. The driver is expected to provide historical information about St. Charles to the tourists. There is no brochure available promoting the service, times or route. Many residents and merchants know little about the system. The trolley was not in operation during the Summer 2000 season, except for registered tour groups, because of failure of the City to employ a full time driver.

The greatest problem the City has encountered for both the SCAT system and Main Street Trolley is with keeping drivers, given the current pay scale and part time status. The City Council voted in July 2000 that the following pay ranges be offered; FY 2000-01 is 18 months from July 2000 through December 2001 (Lewis):

| | |
|-------------|---------------------------|
| FY 1999: | \$ 8.44 to \$ 9.84 / hour |
| FY 2000-01: | \$ 9.32 to \$10.78 / hour |
| FY 2002: | \$11.21 to \$12.10 / hour |

The drivers are required to maintain a Commercial Driver's License (CDL) for a wage that is not much above minimum wage for unskilled labor. St. Charles County also has the lowest unemployment rate in the greater St. Louis Metro area at 1.5%.

The City is currently reviewing its need to expand the SCAT system and discussing growth opportunities with Bi-State Development Agency. The plan is to develop a transit service that supports a new market demographic and public need, by complementing the existing systems

supported by the City. The City of St. Charles currently does not have the revenue sources to support the need for expanding its existing transit system in the City and connecting into the surrounding County or expanding to St. Louis with Bi-State. No progress with Bi-State has been made as of July 2000.

St. Charles is also experiencing more traffic congestion due to the increase in population throughout the County, festivals in Frontier Park, the commercial and industrial development along the Highway 370 corridor, the opening of the Family Arena sports facility and the proposed Convention Center. An increase in popularity of these locations and events create additional concerns for safety, traffic, parking and movement of consumers, residents and tourists within St. Charles. Roads and bridges continue to be built which affect the routes that drivers choose, in addition to affecting planning of alternative transportation routes. St. Charles City has just completed the Hawks Nest overpass between First Capitol Drive and Zumbuhl Road interchanges. St. Charles County is currently waiting for the completion of the Page Avenue expansion project. MoDOT is designing a new interchange for First Capitol Drive and Interstate 70. The City has a bridge design for Fifth Street over Highway 370 to Little Hills Blvd. The First Capitol Drive and Kingshighway intersection by Lindenwood University will be straightened and improved. The City has not forecast changes to the SCAT system based on these new roads.

The residents of St. Charles have twice rejected Prop M for Metro-Link expansion into the County. There is much speculation about the reasons, but maintaining a separate identity from St. Louis seems to be the common theme according to hearsay. Road congestion, bridge building and lack of alternative transit for tourists and residents are the sacrifice of not allowing mass transit into St. Charles County. There is currently no plan to reintroduce the idea in future planning. There are commuter lots available along I-70 for car pools and connection with Bi-State to the North Hanley Metrolink Station. Funding through Bi-State may soon limit this service.

St. Charles County received funds through the East-West Gateway Coordinating Council to pay for a study of all the available transportation, the needs and demographics of the community, and to determine opportunities for improvement. The results were presented to the County Executive in the end of October. The report is intended to clarify some issues in the

County and offers recommendations, but it doesn't provide specific solutions. The information is not yet public knowledge, but a copy of the final report has been provided for comparison to the content of this paper. This comparison will be discussed in Chapter 5 of this paper.

Another consideration is the fact that Lindenwood University is expanding quickly, with a development plan for the City's redirection of First Capitol Drive and the University's recent development for new dormitories and plans for other buildings on campus. The increase of student population in a concentrated area will have an effect on traffic congestion and parking for both the students and residents adjacent to the campus. The student population is a demographic that should be considered in planning the expansion of the SCAT buses. Most "college towns" have some sort of public transit available for the students.

For now, St. Charles City has the only bus system in St. Charles County. The neighboring City of St. Peters and the City of Wentzville 20 miles west of St. Peters are making plans for transportation systems of their own by 2002. At this point, a focus group would be left with a series of questions - rhetoric at best, about how to proceed. The original idea for this paper was to narrow the study or discussion to St. Charles City, to envision as a model for other communities in the County, but subsequent reconnaissance of the interest and needs, expanded the case study to include the entire St. Charles County. The process of changing this focus will be discussed in Chapter 4. Regardless of the audience, the questions remain the same:

- What do the numbers in dollars and riders mean?
- Can a different provider service some customers?
- Where to find drivers for the current buses?
- Who to partner with?
- What funding source to go for?
- How to build consensus?
- How to get past politics?
- How to implement ideas and small changes?
- How to connect with other systems (Bi-State, Metro-Link)

SUMMARY

The link between Communication, Leadership, Total Quality Management for the purpose of influencing Alternative Transportation is an iterative process itself, influenced by the individual iterations of each principle. One iteration has occurred during the development of this paper. The St. Charles City Council recently voted on the pay increases of bus drivers and also discussed the problems surrounding the lack of applicants for drivers. This affected some of the information presented in this chapter. The process of each concept is a cycle, and the integration of these concepts is therefore a cycle, as shown in Figure 2.

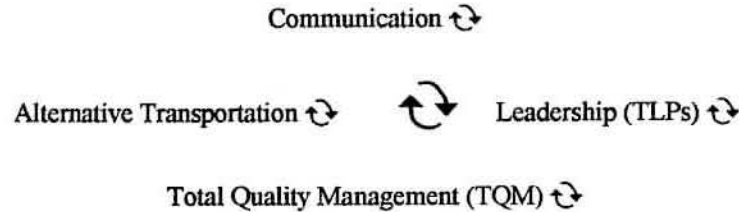


Figure 2: Integrated Cycle

Communication is the cornerstone to plan, prepare, implement and evaluate any topic. The use of TQM and the Army's AAR and TLPs are effective ways to work through this communication process. A topic as complex and possibly controversial as Alternative Transportation requires a well-developed process. Again, the key to make it all work is constant communication. A team can plan all they want, but if the customer doesn't buy the idea, it's difficult to implement a change.

Chapter 2

REVIEW OF LITERATURE

A constant theme within these references is that maintaining continuous improvement and customer satisfaction, through Total Quality Management is difficult and the key to success is through effective leadership and communication. The effectiveness of influencing TQM requires an understanding of Communication; Leadership; Perception; Teamwork; Worker Relationships, Vision and Values; and Attitudes and Behavior. These topics are addressed in the research presented below, which indicates books, magazines, papers, journal articles, etc. The chapter also discusses organizational and political entities, which represented significant learning resources on the subject of alternative transportation in the surrounding community.

“The Implementation of Total Quality Management based on the guidelines of the U. S. Army’s Troop Leading Procedures” - by Elizabeth A. Johnson, P. E.

The correlation between Total Quality Management and the Army’s Troop Leading Procedures is identified in Appendix A. This was developed as the final project of the Public Relations cluster of the Lindenwood University LCIE program. The intent was to develop a solution for implementing TQM in an organization from the perspective of internal public relations. It establishes the cornerstone of theory to link communication, leadership and TQM as stated in the introduction of this paper. The left side of the figure indicates the Army’s TLPs, while the right side identifies a potential business strategy based on a similar thought process.

FM 22-100, Military Leadership - United States Department of the Army

The military maintains a series of reference material for the purpose of setting the standard, defining doctrine and training its troops. The Army’s Field Manual (FM) Series 22

corresponds with leadership development. Military Leadership is the primary resource for the development of junior leaders in the Army. This manual is followed by Leadership Counseling and Soldier Team Development. Each book is classified for unlimited distribution, approved for public release and can be downloaded off the following website: General Dennis J. Reimer Training and Doctrine Digital Library at www.adtdl.army.mil.

The intent of Military Leadership is for a soldier to understand leadership in principle, action and battle, in order to fulfill the expectations of a leader. A matrix of the BE - KNOW - DO attributes is listed in Appendix C. Once a soldier understands the expectations, he should then be able to accomplish the following fundamental responsibilities:

- Demonstrate tactical and technical competence
- Teach subordinates
- Be a good listener
- Treat soldiers with dignity and respect
- Stress basics
- Set the example
- Set and enforce standards.

These responsibilities establish the concept of leadership. General (Ret.) Carl E. Vuono, former Chief of Staff, states at the beginning of Military Leadership,

The competence of our future leaders and their leadership abilities are determined by our ability to educate and train them using the three pillars of leader development: institutional training; operational assignments; and self-development.

Through proper development, a leader is capable of completing a mission, through use of the Troop Leading Procedures discussed in Chapter 1.

TC 25-20. A Leader's Guide to After Action Reviews - United States Department of the Army

Training Circular, TC 25-20 is a specific guideline that establishes the required standard to be met by the facilitator of the AAR. It begins with the description of an AAR, the planning

and preparation required, the conduct of the AAR and finally methods to follow-up an AAR by using the results for maximum training benefit. TC 25-20 is classified for unlimited distribution; approved for public release and can be downloaded off the website www.adtdl.army.mil.

Although every Officer and Non-Commissioned Officer (Enlisted) should be able to facilitate an AAR, it requires practice to stand in front of a group, communicate the intent and keep the dialogue of the soldiers following a positive, productive environment. Several techniques are described in the appendix of the Training Circular to assist the individual to develop their own style and maintain the expected standard for the task.

Hope is Not a Method - What Business Leaders Can Learn From America's Army - by General (Ret.) Gordon R. Sullivan (former Army Chief of Staff) and Colonel (Ret.) Michael V. Harper

The US Military is an influential organization within our society. Corporations historically have mirrored their strategic plans and hierarchy from the military. American business values the leadership skills developed by military personnel. As a result, a critical shortage of company grade officers (Captains specifically) exists, as corporations are recruiting this demographic for high dollar salaries, once the officer's minimum obligation to serve is fulfilled.

The book describes the leadership and management changes of the Army - the transition from the Cold War, through the Gulf War and into today's missions, which are most often humanitarian relief. Each chapter begins with an anecdote to describe the theory presented. The use of anecdotes is consistent with the style of learning in the military - studying history and learning from experience. It should be noted that Army Officers are expected to read and report on a minimum of two professional books each year as part of their continuing education and leadership development.

This book is realistic in its thought process of influencing leadership in the business community. Through their theories, the authors have developed the Rules (with a small r) for Guiding Change, listed in Appendix D.

Leadership is an Art - by Max DePree

Max DePree is a forward thinking businessman, as CEO and Chairman of the Board of Directors, of Herman Miller, Inc., a furniture manufacturer company. He describes his theories in the introduction, "The book is about the art of leadership: liberating people to do what is required of them in the most effective and humane way possible," (1).

DePree's theories are not unlike Hope is Not a Method, but his style is more casual, like story telling. Each anecdote leads to a list of ideas, or theory on the subjects of Diversity, Leadership, Perception, Strength/ Weaknesses, Communication, Entropy, Performance, Culture and Development of future Leaders. The book begins with a story about a construction project with columns too long, therefore, "no one is perfect." He ends the book with a story about an architect's design of columns too short; to prove his employer's demands to require more columns were incorrect, therefore designing columns that supported nothing but his own conviction.

Max DePree writes his theories and ties them together throughout the book into a culminating concept of leadership. The anecdotes paint a picture of his ideas. DePree completes his theories on leadership with the following; "Leadership is much more than art, a belief, a condition of the heart, than a set of things to do. The visible signs of artful leadership are expressed, ultimately, in its practice," (148).

Personal Leadership Application Workbook - by Steven Covey

Business and individuals have embraced the Seven Habits of Highly Effective People® and Principle-Centered Leadership by Steven Covey. As a result, the Covey Leadership Center has been created with seminars, tapes and workbook, and other information to supplement the application of his theories. Covey established his concept of Principle-Centered Leadership in the form of habits, "patterns of behavior that involve three overlapping components: knowledge, attitude and skill," (2). These habits are things that individuals typically already know, but human behavior and possibly addiction (alcohol, work, etc.) limit the acceptance of The Maturity Continuum™, the balanced combination of each of the Seven Habits. Covey discusses the difference between efficiency and effectiveness and believes that, "Habits of effectiveness can be

learned; habits of ineffectiveness, unlearned,” (2), therefore developing personal leadership. The following lists these seven habits:

Habit 1: Be Proactive[®]

Habit 2: Begin with the End in Mind[®]

Habit 3: Put First Things First[®]

Habit 4: Think Win-Win[™]

Habit 5: Seek First to Understand, Then to Be Understood[™]

Habit 6: Synergize[®]

Habit 7: Sharpen the Saw[™]

Covey had improved his theories through the development of “The 4 Roles of Leadership[™] (formerly Principle-Centered Leadership),” (www.franklincovey.com/public). These roles are described on the website, as well as the 7 habits, and listed as follows:

1. Pathfinding: Creating a Blueprint
2. Aligning: Creating a Technically Elegant System of Work
3. Empowering: Releasing the Talent, Energy, and Contribution of People
4. Modeling: Building Trust with Others-the Heart of Effective Leadership

“Corps Values”, Inc.[®] The Magazine for Growing Companies, by David H. Freedman

The article addresses the importance of three concepts of the U. S. Marines - Training, Leadership and Decision-Making. The former two concepts greatly influence the effective ability for the latter. “The most prestigious slot for a marine officer of almost any rank...is one in which he or she is entrusted with the selection and training of other marines,” (59). Officer Candidate School develops the marine: “the most-scrutinized quality is what the marines constantly and almost casually refer to as ‘leadership.’ ‘It has no exact definition,’ says Lehockey shrugging. ‘It’s our job to recognize it’ ” (59). On the basis of leadership, Colonel Lee is quoted in the article, “What the world needs is someone who can grasp the workings of an entire organization, understand people, and motivate them,” (59). In the end, the decision-making process is the most critical ability.

Making decisions in the face of incomplete information is especially discomfoting when you know a mistake can cost lives...Marines speak of the '70%' solution, by which they mean an imperfect decision whose saving grace is that it can be made right now. In an environment where the opposition can regroup and take the advantage in a heartbeat, indecisiveness is considered a fatal flaw - worse than making a mediocre decision, because a mediocre decision, especially if swiftly rendered and executed, at least stands a chance (63).

The article correlates the similarity of the Marines and Corporate America. Both are extremely competitive environments, where every decision is strategic and effectiveness is critical. The marines are conscious of their time constraints. Their training develops leaders, which in turn leads to an effective-decision making process.

Out of the Crisis - by Dr. W. Edwards Deming

W. Edwards Deming describes in detail his theories of quality management. He sees the entire process of continuous improvement and customer satisfaction as a chain reaction. The chain reaction is, in effect, managed through the Plan, Do, Check, Act cycle as described in Chapter 1 of this paper. He describes the use of effective tools, especially statistics, in identifying the root cause of a problem. Deming also debates the practicality of business management theories. He suggests that the lack of effective processes handicaps the opportunity for improvement and satisfaction.

The successful development of Total Quality Management in Japan is a constant reminder that the process (not program) requires a shift in the cultural mindset of an organization. This requires training, leadership and communication about the Triangle of Interaction, "Quality must be measured by the interaction between three participants... (1) the product itself, (2) the user and how he uses the product, ... and (3) instructions for use, training of customer and...repairman..." (176).

Many universities and organizations such as the American Society for Quality and the American Society of Civil Engineers, write detailed articles about Deming's theories. These

articles provide general background on the basic theories. Out of the Crisis is an excellent book for the quality professional, but may be overwhelming for the lay person. The benefit Deming provides the industry, is the application of the PDCA cycle, the understanding of the Triangle of Interaction, and the reminder of the 14 Points for Management and the 7 Deadly Diseases listed in Appendix E. Deming's greatest gift is the ability to ask challenging questions and relate his concepts to the ancient philosophers. The following is a Japanese poem that reminds Deming of perception in relation to the triangle of interaction (178):

Is it the bell that rings,
Is it the hammer that rings,
Or is it the meeting of the two that rings?

Implementing TQM in a Construction Company - by Dr. G. W. "Jerry" Chase for the Associated General Contractors (AGC) of America

Dr. Gerald Chase, Professor (Retired), at Iowa State University wrote this book for the AGC Quality Construction Committee. He is also a retired Army Officer. Through his studies, he developed The Structure of TQM shown in Figure 3, in which Improved Communications is the foundation, followed by the ground floor of Teamwork, and the walls and roof of Continuous Improvement (21):

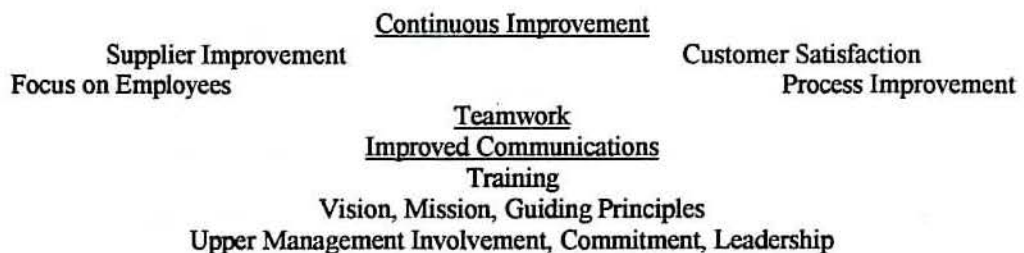


Figure 3: The structure of TQM ... A Model

The book describes how to implement TQM and avoid the Potential Obstacles. Much of the information is a synopsis of Deming and Juran, with analogies directed toward the construction industry specifically. The Steps in Implementing TQM and the Potential Obstacles

are listed in Appendix F. The obstacles are valid, since most companies “talk the talk” and shelve the information as a resource. A company will implement a “program”, but never follow through on the continuous improvement part, accepting that TQM is a corporate lifestyle change.

The American Society for Quality - www.asq.org

ASQ is an additional source of information regarding quality. Their publication “Quality Progress” has feature articles on quality, leadership, communication etc. The website describes the levels of the Standards and Certification requirements for the International Standards Organization (ISO), Research and Information Services and links to other related websites. The purpose of the organization is described as follows, “ASQ is a society of individual and organizational members dedicated to the ongoing, development, advancement, and promotion of quality concepts, principles, and techniques,” (www.asq.org).

Quality Engineering Handbook - by Thomas Pzydek

This handbook is just one of a series of texts prepared by Thomas Pzydek. He is quickly becoming a modern guru in the application of quality principles fostered by Walter A. Shewart in 1924. The series includes detailed information on the various aspects of quality: management, engineering, reliability, inspection, auditing, etc. Each text describes in detail the “Body of Knowledge” required by the American Society for Quality (ASQ) for certification in each topic area. ASQ requires an understanding of communication and human behavior, as a key aspect for quality practices and applications to be successful. The simple use of statistical methods is not enough for quality processes.

Pzydek has included with his text example problems for the users to grasp the concepts and prepare themselves for the ASQ certification exam. The Quality Engineering Handbook is an excellent resource of the major theories associated with quality engineering.

A similar series of resource material is the Certified Quality Engineer Primer, published by the Quality Council of Indiana. Although it is based on the same “Body of Knowledge”, it is

not as well organized or presented as the Quality Engineer Handbook. The "Body of Knowledge" specifically for a Certified Quality Engineer exam is listed as follows (Wortman 3):

1. Management and Leadership in Quality Engineering
2. Quality Systems Development, Implementation, and Verification
3. Planning, Controlling, and Assuring Product and Process Quality
4. Reliability and Risk Management
5. Problem-Solving and Quality Improvement
6. Quantitative Methods

Journal of Management in Engineering - American Society of Civil Engineers

The Journal of Management in Engineering (JME) is a bi-monthly publication managed and distributed by the American Society of Civil Engineers (ASCE) and has been around for 16 years. It has evolved into a magazine format, with feature articles and peer-review papers based on experience and research, and regular columns on people skills, environmental, legal and communication topics. The demand readership of this journal has required the spin-off of a quarterly journal - Journal of Leadership and Management in Engineering (LME) - to begin publication in January 2001. Total Quality Management, leadership, communication, strategic planning, change management, etc. are common topics for the articles and papers. A brief summary of articles is listed below.

Strategic Planning in Public Sector Engineering Organization, by Kuprenas, Chinowsky, Harano

One key observation of this paper is the use of the SWOT analysis in strategic planning. SWOT (Strengths, Weaknesses, Opportunity, Threat) is an excellent way to observe a situation focus on the goals. The study addressed the City of Los Angeles, Bureau of Engineering identified lessons learned in the success of strategic planning, communication, implement the plan, and rewarding participation.

This paper has described the basic purpose, methods and expected results of strategic planning efforts...and providing a case study illustration of the process...several recommendations for future planning efforts were provided that may lead to other organizations achieving benefits similar to those identified for the city of Los Angeles (40).

Implementation of Quality Improvement for Transportation Construction Administration, by Charles T. Jahren and Mark O. Federle

This paper discusses the use of Deming's PDCA (Plan, Do, Check, Act) cycle to implement TQM in the Iowa Department of Transportation (IDOT), Offices of Construction. It describes the foundation established and recognizes the struggles and successes of the system.

The foundation elements of the quality improvement system must be laid *in this order*:

1. Select a steering team.
2. Develop a mission statement.
3. Identify key functions.
4. Identify important customer groups.
5. Develop the performance measuring system.

The PDCA cycle for this process is seen in two parallel paths, the first cycle being Performance Measurement and the second Quality Improvement.

The Why and How of Facilitative Leadership, by Mel Hensey

This is an excellent article that provides guidance in how to facilitate a discussion and bring individual perceptions into a single shared wisdom. It describes the required skills and communication of the facilitator, common beliefs about leadership and the behaviors and action patterns of the participants. The process of facilitation establishes an agenda, ground rules, and goals of the team meeting.

Leaving a Legacy, by Richard G. Weingardt, P.E.

CEO's are often known for their business savvy, but as an owner and engineer, Weingardt has demonstrated his leadership style, communication ability and willingness to teach others. He has established the 10 Commandments of Leadership, Four Kinds of Power and also has written guidelines to personal development.

Survey of TQM in Construction Industry in Upper Midwest, by McIntyre, Kirschenman

The paper indicates the overall attitude toward the process of TQM. "However, the degree of acceptance and integration of TQM by the construction industry has typically lagged behind other industries... Some argue that the implementation of the TQM philosophy is basically worthless '(20% 1997)', (67). This perception provides evidence as implied in the article that the particular organization making the statement is blocked by one of the many obstacles of TQM.

Improving Construction Methods: A Story about Quality, by Gerald W. Chase

This article summarizes an address to the ASCE National Convention about a success story of one company that embraced the concept from the book Implementing TQM in a Construction Company written by Dr. Chase for the Associated General Contractors (AGC) of America. The story describes the TQM process as finding room for improvement, listening to customers, and partnering with others. The emphasis revolves around vision, teamwork, leadership, and communication. The company featured in the story describes "the superintendents and project managers who have taken this approach (TQM) have experienced an improvement in execution, quality, safety and profitability," (33).

Several more articles and papers regarding leadership, communication and total quality management exist in relation to the engineering and construction industry. The

following is a list of additional articles and papers of interest in the Journal of Management in Engineering:

- *Perceptions of Process Quality in Building Projects*, by David Ardit and H. Murat Gunaydin
- *Assessment of Organizational Change for Public Construction Organizations*, by Amarjit Singh and Max M. Shoura
- *Going to the Future to Develop Transportation Leadership Skills*, by Vicki S. Kaman and Thomas Mitchell
- *The Personality of Civil Engineers*, by Holly M. Johnson and Amarjit Singh
- *Speak Out: The Engineer as Communicator*, by David Jansen

The World According to Peter Drucker - by Jack Beatty

Jack Beatty has compiled information from Peter Drucker's numerous books and writings into one source. He begins with a brief biography of Drucker - first describing his life as a small boy in 1914 in Austria. Drucker is famous for his dyads, one-line phrases that get his point across. His theories tend to revolve more about management, than leadership. Drucker established Eight Realities for *Management for Results* (122):

1. Resources and results exist outside not inside business.
2. Results come from exploiting opportunities, not from solving problems.
3. For results, resources must go to opportunities, not to problems.
4. "Economic results" do not go to minor players in a given market, but to leaders.
5. Leadership, however, is not likely to last.
6. "What exists is getting old."
7. What exists is likely to be misallocated.
8. To achieve economic results, concentrate.

Item #5 is particularly provocative, since most modern theories embrace leadership as a method to foster communication.

Another of Drucker's theories is used by businesses to develop and manage marketing strategies. "Drucker's 'three classic queries'...is the first function of management." The purpose is, "To ask, 'what is our business?'; 'what will be our business?'; and 'what should be our business?'" (109). These questions within his various writings, have been interpreted and modified into 5 questions, as presented by Mr. Joseph Silverio's Product Management Cluster at Lindenwood University. Mr. Silverio presents Peter Drucker's 5 Questions as:

1. What is my business?
2. Who is my customer?
3. What does my customer value?
4. What ties my customer to me?
5. What do I want my business to be?

These five questions were the basis of the original paper that developed the case study for Public Transit for St. Charles for the Winter 1999 quarter. Even though much of his theories do not relate to the study presented in this paper, Jack Beatty's book is an excellent source for understanding the background and theories of an individual, whose ideas have helped shape our business environment. Drucker's theories provide thought and discussion, which allow others to dispute and improve his concepts, providing a foundation for the next generation of writers and thinkers to build on developing their own theories.

"Change Leaders, an excerpt from the new book by Peter F. Drucker," Inc.[®] The Magazine for Growing Companies, by Peter F. Drucker

It appears that Peter Drucker has himself changed some of his ideas regarding leadership versus management. His new book Management Challenges for the 21st Century embraces the concept of leadership, an evolution from his previous theories of Management by Objective and its idea that "Leadership, however, is not likely to last," (Beatty 122).

This excerpt provides insight into the leadership required for change management and the idea that the only constant in life is change. The first policy is that of *Organized Abandonment* "The question it has to ask - and as seriously - is 'if we did not do this already, would we, knowing

what we now know, go into it?' If the answer is no, the reaction must not be 'Let's make another study.' The reaction must be 'What do we *do* now?' " (66).

The policy then moves into systematic improvement; "continuing improvement requires some major decisions by an organization," (69). Then exploiting success leads to innovation. "It makes the entire organization see change as an opportunity," (70). The introduction of changes needs to be "on a small scale...If the pilot test is successful, the risk of change is usually quite small," (72). The organization of change requires a "separate budget for the future," (72). Of course change requires balance and continuity and "continual work on information flow," (72). Drucker never introduces a new concept without a dyad. On change leadership he states, "Everything new gets into trouble at some point. It needs a champion."

Management of Organizational Behavior - by Hersey, Blanchard, Johnson

Attitudes, beliefs and behavior are discussed throughout the book in order to identify motivation, leadership and management skills in a given situation. Detailed discussion of Maslow's "Hierarchy of Needs", Herzberg's "Motivation-Hygiene Theory" and McGregor's "Theory X and Theory Y", among others are provided. Discussion of these theories leads into determining the effectiveness of leadership and management, and understanding the environment of a situation. The key point to be made by the authors is the concept of Situational Leadership®.

According to Situational Leadership, there is no one best way to influence people.

Which leadership style a person should use with individuals or groups depends on

the readiness level of the people the leader is attempting to influence (190).

The leadership of the employer and the relationship of the employee are characterized into four quadrants. The leadership relationship should change as a result of the follower's ability and willingness to perform the task. The leader's behavior would then reflect the style of Delegating Participating, Selling or Telling, according to the situation. Any change requires leadership. "We also noted that leadership and influence may be used interchangeably...the three basic competencies in influencing (are) diagnosing, adapting and communicating," (336).

The concept of Situational Leadership is further explored and related to perception, power, discipline, communication, implementation and strategies to transform an organization and integrating them with the classic theories of Maslow, Herzberg, McGregor and the like. A representation of the diagram of Situational Leadership® is found in Appendix G.

This is PR. The Realities of Public Relations - by Newsom, Turk, Kruckeberg

The text provides a broad view of Public Relations and clearly defines the diverse roles and responsibilities of the PR practitioner. The perception that many have about PR is that the practitioner is someone who stands in front of a camera to represent a third party on the evening news or the producer of a press release. The authors establish that the PR practitioner is a problem finder, solver, and preventer, as well as communicator, facilitator, monitor, mentor and coach. In fact, it is the PR practitioner's responsibility often to influence the change of perception of others. This change is accomplished through the research of the attitudes, opinions and beliefs of others, in order to advocate a concept and build consensus in regard to the situation. The 10 Basic Principles of PR are listed in Appendix H.

The Addictive Organization - by Schaeff, Fassel

This was a book that "hit home" in understanding the frustrations and negative attitude in an organization. The subtitle sums it up nicely, "Why We Overwork, Cover Up, Pick Up the Pieces, Please the Boss and Perpetuate Sick Organizations." The authors believe they, "developed a unique description of a process in group and organizational life. There were four strands in the evolution of these ideas that were important to us: organizational development, paradigm shift concepts, women's literature, and addictions research and treatment," (13).

Organizational development is further defined as Participation, Innovation, Change and Transition, Organizational Transition, Leadership and Organizational Transformation. A trend exists in corporations to create a paradigm shift. "A paradigm is both content (ideas) and process (method)," (33). Another trend is "that women are now beginning to leave corporations because they really have not been influential in changing the climate in corporations to make them more

humanistic and healthy," (43). The authors state "that the addictive process is pervasive, contagious, and has generally remained unnamed and therefore unaddressed in the society and organizations. The process perpetuates a denial system..." (44).

The final strand, addictions, is discussed from a research perspective then moves on to describe how addiction transfers through the hierarchy from individual to society and back down again. "Indeed, our society itself is an addictive system and acts exactly like an individual addict in the way it functions and the processes it sets up," (51). The authors describe in detail the terms and characteristics of the addictive system, the four major forms of addiction in organizations, recovery of the addictive organization, and implications and conclusions and the application of the Alcoholics Anonymous 12 Step Process. The 12 Step Process is listed in Appendix I. This recovery process would provide an environment in which employees were happier and enjoyed their work. In summary, "we describe three major currents in modern organizations - participation, innovation, and leadership... Participation (1) with the self and with one's own recovery, (2) with others, ... (3) with the organization,... Innovation is more than making cosmetic changes: it is making a 'leap of faith' out of the existing paradigm... Leadership is not control. It is, first and foremost, a model of self-responsibility," (226).

Organizational Communications for Survival - by Richmond, McCroskey

The basis of this book was not about how to train managers, but to provide "opportunities for people to learn how to *be* managed," (34). On leadership, the authors discuss McGregor's Theory X (authoritarian) and Theory Y (communicative) styles. One section discusses personality types and relates the style of leadership to the person and the situation. The information presents theories of human behavior; the process of communication and the resulting perception individuals have about a situation. This leads into the affect of decision-making and the developed theory of the Management Communication Style (MCS).

The communication style of a supervisor within an organization, we believe, is a function of both the management style imposed on the supervisor by the organization (or chosen by the supervisor within the parameters permitted by the

organization) and the communication style of the individual supervisor which that individual brings to the organizational context-hence our term MCS (80).

The theory of MCS describes the framework for the communication styles of Tell, Sell, Consult and Join, which covers the spectrum from very boss to very employee-centered leadership. This theory is similar to Hersey's Situational Leadership[®], where the style affects the influence of change and conflict management. In the end, they establish the individual's responsibility to manage their own attitudes and behavior during the communication process.

"Conflict Resolution in Construction," The Military Engineer, by Kenneth W. Meeks, D.S.C., P.E.

Conflict Resolution is a skill that requires understanding of people and the situation. The key to success is communication and teamwork. The construction industry recognizes the need to develop the skills of young engineers in order to manage conflict effectively. The article describes the causes of conflict and the reaction to conflicts. There are three points for young engineers (64):

...These (opportunities) are valuable learning experiences that encourage them to become effective communicators.

...Normally the people who know the most about an issue are those at the lowest level; they are usually in the best position to resolve the issue.

...We should not deprive people the opportunities to succeed.

The ability to resolve conflict is an opportunity for improvement.

Educators and senior managers need to teach the techniques and process of conflict resolution to young construction engineers, and encourage them to remember and practice the cardinal rule when confronted on the job site - Always strive to resolve conflicts and problems in construction at the lowest possible level (64).

Rising Tide, The Mississippi Flood of 1927 and How It Changed America, by John M. Barry

Rising Tide is a historical example of failure due to a bureaucratic process created by engineers and government. A bureaucracy may evolve in an organization as a result of

miscommunication and lack of strategic planning, that results in a group that is divided due to a sense of competing objectives in decisions. The mismanagement of the Mississippi River in the 1800's proved to create a disaster as a result of lack of communication and strategic planning.

But the Mississippi River Commission never became a scientific enterprise. It was a bureaucracy. The natural process of a bureaucracy, by contrast, tends to compromise ideas. The bureaucracy then adapts the compromise as truth and incorporates it into its being. ...Yet the greatest and most dangerous mistake of the Mississippi River Commission still lay elsewhere in its position on the levees only policy. Almost inconceivably, the commission arrived at a position that Eads, Humphries, and Ellet had all violently rejected. ...Only levees were built (90).

The levees only policy amplified the flood of 1927. The Mississippi River Commission evolved into the modern day Army Corps of Engineers and the Mississippi River is currently managed through a combination of locks and dams, levees, reservoirs, outlets, and cutoffs - all pieces of ideas from each of Eads, Humphries and Ellet. Had these men effectively communicated the pros and cons of their theories to the military management, the flood may not have been so devastating with a flow of 3 million cubic feet of water per second. In comparison, the Mississippi flood of 1993 carried one million cubic feet of water per second (16).

A Public Transit Plan for the City of St. Charles, by Elizabeth A. Johnson, P.E.

This paper was written for the Product Management cluster of the Lindenwood University LCIE program. It established the basis of interest for further development as a case study for the content of the thesis of this current paper. "The intent of this project is to develop a marketing plan for a convenient, cost effective transit system for the City of St. Charles and beyond," (1). The project examined the market, consumer, product, trade, competitive, and economic analysis, ethical/legal issues, alternatives and final recommendation.

"Breaking the Learning Curve," Bus Ride, by Beth Hess

Ball State University found itself without a contract for an independent bus service provider in 1992, so it decided to start its own service with little experience. The staff began researching the available equipment, purchased new buses and "Supervisors and drivers held regular meetings during the start-up to discuss questions and concerns about the service," (32). The service has grown in the past eight years and demand for more routes and buses is high. "Although Weller and Kearns now work with proven routes, good buses and great drivers, things didn't run so smoothly at the beginning," (32). This article is a story that shows how a little diligence can go a long way toward success.

The Military Engineer

The topic of articles from this edition of the magazine is "Over and Under", in reference to transportation issues throughout the country. Although some articles address new technology for design and construction of roads, bridges and tunnels; two articles address alternative transportation.

Transit by DBOM: A First, by David P. Smith, P.E.

DBOM is the acronym for "design-build-operate-maintain," (25). It addresses mass-transit (rails), but the philosophy and process can be applied to any system - including public-transit (buses). Not matter what the system is, "teamwork is the key," (26).

Opportunities and Innovations in Transportation, by George Marks, P.E.

"As the millennium approaches, various public agencies will have greater latitude to develop solutions for regional, interstate, and international transportation," (29). The article describes TEA-21 (the 1998 Federal Transportation Act for the 21st Century) which "authorizes a total of \$215 billion for highway, public transit, and safety programs over the course of five years," (29). It is important for communities to understand this legislation and how it affects their

planning and development. "Corridor planning efforts must address highway, transit, freight, bicycle, and pedestrian travel needs to develop multimodal needs for the future," (30).

Note: The organization known as St. Louis 2004 is communicating with local communities about the availability of TEA-21 money and a regional plan to develop parks and paths corridors throughout the surrounding 10 county region. The proposition known as The Clean Water, Safe Parks and Community Trail Initiative was on the November 2000 ballot to ask voters to support a 1/10 of \$0.01 tax increase to contribute to the funding of TEA-21. This issue was passed in St. Charles County.

CyRide, City of Ames, Iowa, www.city.ames.ia.us/cyrideweb

The City of Ames, Iowa maintains all of the statistical information for the past 27 years for their public transit system, better known as Cyride (Named for the Iowa State University mascot Cy). The information is thorough and provides a comprehensive view of the growth, funding, cost and revenue of the system. The system runs in partnership with the University, which provides ~30% subsidy of the system operating cost, with reduced prices for the students. It is important to note that it is extremely easy to live in most parts of the city without dependence on an automobile, because of the transit system. The website has a link to another source of information for data on other city transit systems, University and Community Transportation Association (UTCA), www.city.ames.ia.us/cyrideweb/UTCA.

Ride Finders - Tony Lane, Senior Account Representative

Ride Finders motto is: "Linking People and Places." Although Ride Finders is not a direct provider of public transit, it is a source of information and insight to help lead the change of people's perception about alternative transportation. Ride Finders goal is to:

Promote ridesharing through employer education, incentives and technology; to promote carpooling, vanpooling, telecommuting, flexible work hours and other innovative work styles which help to reduce the congestion and pollution created by commuters driving alone (Strategic Plan 2000).

OATS[®], Inc. (formerly Older Adults Transportation Service)

OATS is another provider of alternative transportation in the St. Louis region. They have a greater presence in St. Charles than Care Cab and provide a service to the similar demographic that the St. Charles Area Transit markets its service. "OATS, Inc. offers transportation to the elderly, 60 years of age and older, and to individuals with a disability, 18 years of age or older with a letter from a physician stating the disability. OATS transports people to medical appointments, essential shopping and various Nutrition Centers," (Memo July 2000).

Care Cab Transportation - William J. Jurkiewicz, Executive Director

Care Cab is a provider of Alternative Transportation in the Greater St. Louis Region, and a resource that might be underutilized within St. Charles City and County. Their mission follows:

Care Cab: The leader in providing quality transportation and related services to persons with developmental disabilities and others with special transit needs.

[As recommended for board approval, 5/26/99]

Our Values:

Effective We will consistently provide quality transportation and related services to assure that our customers arrive at their destinations safely and on time.

Committed We are guided by our principles and goals and will remain focused on those values regardless of distractions that may confront us.

Efficient We will provide transportation and related services at the lowest cost possible without compromising quality, safety and effectiveness.

Responsive We will go the "extra mile," doing whatever is necessary, to address the needs of our customers, their families and our funding sources.

Compassionate Our riders face special challenges and we will do everything we can to serve them in the most humane, caring manner possible.

Ethical We will be honest in our dealings with others and will conduct ourselves in a manner consistent with the highest professional standards of conduct.

Dynamic We will continue to change and innovate as the needs of our customers and funding sources evolve.

[As referred to board for review and approval, 5/26/99] (Jurkiewicz)

TRANSPORTATION COMMITTEES / ORGANIZATIONS

There are several committees and organizations that have an active and/or passive interest in public transit issues within the city and county. The following is a brief summary of their interest, involvement and goals. The purpose to mention these groups is for the reader to better understand the background of the community and perceptions toward developing and improving public transit within St. Charles City and County.

St. Charles City Chamber of Commerce Transportation Committee - Nancy Stunkle, Chamber Director and Gary Elmstad, Committee Chairman

This committee meets once per month. They mostly discuss topics related to road projects and the development of new corridors, like the Page Avenue Extension and Hwy-370 business development. Their interest in public transit is limited to getting workers to/from the work place and the overall impact on the economic development of the local community. They believe that substantial subsidy money is the only way for a public transit system to be successful.

St. Charles County Legislative Workshop - Sally Faith, County Councilwoman and Chairwoman, and Herman Elmore, St. Charles City Councilman and Transportation Subcommittee Chairman

The Legislative Workshop is a quarterly meeting of councilmen and aldermen from communities within St. Charles County. They discuss several issues that have impact throughout County. Alternative Transportation is a current subcommittee but has not met in several months due to other priorities of the workshop.

St. Charles County Economic Development Council (EDC) - Kevin Kast, Transportation Committee Chairman, President St. Joseph Hospital - SSM Healthcare

The EDC recently developed an alliance of approximately thirty (30) business leaders in St. Charles County called Partners for Progress. They contribute money each year to fund various initiatives throughout the County. One of their high priorities is influencing the growth of public transportation. A proposal for consultation was submitted to SSM Healthcare (a Partners for

Progress member), to provide an immediate opportunity for the group to assist in the influence of expanding alternative transportation, as presented in the case study of this paper. The proposal is listed as an Exhibit in Chapter 4.

St. Charles County Transit Authority - James Seamons, Chairman, Advisory Committee

This sole purpose of this committee is to serve as administrator of tax dollars gathered within St. Charles County intended to support Alternative Transportation systems. It was developed to manage Proposition M (Metrolink) dollars, but that initiative failed twice in elections. There was an annual meeting on September 9, 2000 to discuss placing a new tax proposal on the 2001 ballot that would support public transit throughout the county. The committee received funding through the East-West Gateway Coordinating Council for an outside company to study the demographics, transportation resources available, and transportation needs for St. Charles County. The final report was presented to the County on October 28, 2000.

City of St. Charles - Herman Elmore, City Councilman Transportation Representative

The Public Works Department does not see a need to discuss the issues of public transportation if additional funding, subsidy or resources are not available. The city recently purchased a used bus from Bi-State Development Agency in order to extend the service hours of the SCAT system to serve the workforce demographic. The City has also recently hired a driver for the Main Street Trolley. Councilman Elmore believes the current SCAT routes are obsolete, but has not made an effort to improve the system without additional funding to pay for drivers and the extension of the service hours.

Chapter 3

SELECTIVE REVIEW AND EVALUATION OF RESEARCH

“The only constant in life is change.” Transformation, another word to describe change, is the constant theory presented in the sources referenced in Chapter 2. The focus on transformation, and the obstacles described as resistance to change, creates a complex link for integrating the principles of communication, leadership, and TQM to influence positive change in a system. Each of these principles is difficult on its own, which is why their cyclic and iterative processes are misunderstood, misapplied, forgotten, or perceived as not valid, important, or possible to reach. It is because they are difficult, that so many books, papers and seminars are devoted to try to get the point across in laymen’s terms. It is easy to say that we as individuals, an organization, or society need leaders, quality, teamwork, communication, change, etc. The first step is to understand in more detail about the theories from the sources and how they apply to any situation. The primary sources are - The Addictive Organization, Hope is Not a Method, Management of Organizational Behavior, Military Leadership, and Out of the Crisis. Implementing TQM, which is based on Deming’s theories, is briefly mentioned to reinforce the analysis. Each will be discussed, with comparison and contrast of ideas and theories.

Transformation

The first step is to understand the perspective of transformation from the sources and establish the integration of theories. The key words to identify from these definitions are leadership, culture, value, behavior, action, direction, vision, strategy, and foundation.

Hope is Not a Method - The central thesis of this book is that it is possible to transform any organization so that creative, adaptive behavior becomes imbedded in its culture, so that it can be successful in a future that cannot be predicted (Sullivan 231).

Management of Organizational Behavior - This new leadership arena involves specific leadership behaviors, actions, and strategies that are required to bring about organizational transformation (Hersey 521).

Out of the Crisis - The aim of this book is transformation of the style of American management... It requires a whole new structure, from foundation upward... The aim of this book is to supply direction (Deming ix).

The Addictive Organization - Consequently, organizational transformation is not value free. It is vision led. We would say it is more than an alternative to organizational development, in that it has an appreciation of spirituality; indeed, it has a spiritual base as an explicit component (Schaefer 31).

Sullivan makes a distinction between change and transformation. "Change can be evolutionary... transformation... results in the creating of a different organization," (Sullivan 156). The next step is to understand the key concepts related to transformation in greater detail, beginning with the definition of leadership.

Leadership

Hersey and the Army define leadership in similar manners, although each chooses different paths to get the point across. According to Hersey, "Leadership is the activity of influencing people to strive willingly for group objectives," (Hersey 90). In the Army definition, "Leadership is the process of influencing others to accomplish the mission by providing purpose, direction, and motivation," (Military Leadership 1). Each recognizes the need to influence others, but the Army's definition is more detailed. "The process" includes principle, action and battle; and the objective requires "purpose, direction and motivation." In relation to civilian business, the term "battle" can be synonymous to "corporate take-over", therefore considered relevant in theory.

Hersey sees leadership and influence as interchangeable and dependent on the situation; and the transformation as including “leadership behaviors, actions, and strategies” which is similar to the Army’s “process”. (Battle and strategy may also be considered interchangeable.) Another perspective to leadership comes from Sullivan, whose theories are based on Army doctrine.

Sullivan makes the distinction “Management has to do with an organization’s *processes* - performing them correctly and efficiently; leadership has to do with an organization’s *purposes*,” (Sullivan 43). He also defines the Leadership Trinity in that “ ‘leading’ has three dimensions, and we use the term ‘strategic leadership’ to embrace this gestalt: managing, creating the future, and team building,” (Sullivan 44). He defines later in the book; “Team building is a process of distributing leadership. We want our people to say: ‘The team won/lost’ not ‘I hit a home run.’ Being a leader in this sense is not about rising to the top; it is about accepting the discharging responsibility,” (Sullivan 119). This corresponds to the Army’s doctrine from Field Manual 22-102, Soldier Team Building, which is in the series along with Military Leadership and Leadership Counseling.

Deming does not define leadership, but discusses the purpose of leadership. “The aim of leadership should be to improve the performance of man and machine, to improve quality, to increase output, and simultaneously to bring pride of workmanship to people,” (Deming 248). He recognizes that leadership is a critical component of the 14 Points for Management in the process of quality improvement.

Hersey’s work to develop leadership strategies for organizational transformation includes “a deliberate influence process on the part of an individual or group to bring about a discontinuous change in the current state and functioning of an organization as a whole. The change is driven by a vision based on a set of beliefs and values that require the members of the organization to urgently perceive and think differently and to perform new actions and organizational roles,” (Hersey 525).

The common thread running through these theories is that it is necessary to understand behavior and motivation of people in order to develop strategies and action to influence the transformation of an organization.

Behavior and Motivation

The Army had developed its leadership doctrine through direct experience and study of leadership philosophy. "The study of the skills, knowledge, and attitudes of effective leaders of the past has identified certain *leadership factors, principles, and competencies* they have mastered," (Military Leadership viii). The Army applies the principles of leadership in terms of leadership in action - what a leader must BE, KNOW, and DO, as detailed in Appendix B. What a leader must "BE" defines the character and ethic of the individual based on beliefs, values and norms and how it applies to the ethical decision-making process.

Hersey defines behavior as "basically goal oriented. In other words, our behavior is generally motivated by a desire to attain some specific result," (Hersey 25). This definition is derived from the following:

Lewin's equation ($B=f(P, S)$) then suggests that (*Behavior*) is a function of something both *inside* the Person and *outside* the person in the Situation. This 'something' inside the person is motives or needs that are reflected in individual attitudes - the way individuals feel about things - and represented by personality - an individual's tendency to act (Hersey 24).

Hersey further describes how motivation and goals develop into behavior and results in an activity. The book leads into MacGregor's Theory X and Theory Y, Maslow's hierarchy of needs, and other similar studies on behavior and motivation.

In comparison to Lewin's equation, the Army takes the theory of behavior one step further to include communication as a function of people and the situation. What a leader must "KNOW" includes how these four factors (Leader, Led, Situation, and Communication) affect each other. The other aspects that a leader must know are standards, themselves, human nature, job description and the team. Standards are required in every business from the military, to engineering specifications, to traffic speed limits and signals, etc. "As a leader, you must realize you are three people: who you are, who you think you are, and who others think you are," (Military Leadership 38). A person's perception may not see or understand how others perceive

them, or that their behavior contradicts how they think they will behave. It can also be related to Deming's Triangle of Interaction - the product, the user, and instruction for use, as described in Chapter 2. Once a person knows himself, he can begin to know others in the form of human nature and in teams. The final issue a leader must "KNOW" is his job. This requires not only knowing the job description, but how to plan, develop strategy, communicate, teach, mentor, and make effective decisions.

To "KNOW" human nature requires an understanding of potential behavior, fear, and the emotions that contribute to fear. Another of Deming's 14 Points for Management is to "Drive out fear, so that everyone may work effectively for the company," (Deming 23). This can relate to fear of losing a job, or that a piece of machinery is not working properly. Fear is a result of insecurity and leads to anger, "skepticism and mistrust" (Chase 14), as studied from the work of Deming. Sullivan describes how to build trust: "Leaders can contribute to the climate of trust by demonstrating commitment, moral courage, honesty, respect for human dignity and integrity," (Sullivan 76).

Hersey describes "trait research" of "outstanding leaders and their followers" completed by Warren Bennis. "On the basis of this research, he identified four common traits, or areas of competence, shared by all ninety leaders."

1. *Management of attention.* The ability to communicate a sense of outcome, goal, or direction that attracts followers
2. *Management of meaning.* The ability to create and communicate meaning with clarity and understanding
3. *Management of trust.* The ability to be reliable and consistent
4. *Management of self.* The ability to know one's self and to use one's skills within the limits of one's strengths and weaknesses (Hersey 102)

The area of negative leadership traits is equally important. "In one study, John Geier found three traits that kept members from competing for a leadership role. Those traits were, in order of importance, the perception of being uninvolved, of being nonparticipants, or of being extremely rigid," (Hersey 103). Hersey also summarized, "The most frequent cause for derailment was

insensitivity to others, but the most serious was untrustworthiness. Betrayal of trust - not following through on promises or double-dealing - was the one 'unforgivable sin,'" (Hersey 104). Again, "ability to know one's self" could develop the leader and prevent the perception of negative traits. Schaefer takes dishonesty one step further, to include it as a characteristic of an organization, "Dishonesty and denial may be the clearest characteristic of an addict, but control is the prime characteristic of the addictive organization. Perhaps because organizations are so complex, they look to control as a method of reducing chaos," (Schaefer 167).

Perception

"Perception is reality" (Dehner). Most Americans perceive military leaders as authoritarian, which in fact may be a result of confidence in the decision making process, and effective leadership styles, rather than the arrogance of giving direct orders. One primary mission of the military is to train troops, which would be a more directive style, but the building of strategy requires participation, and delegation of authority is a must for a successful mission. The military hierarchy is designed for effective leadership and delegation, once the troops have been properly trained. The responsibility given an individual for any mission is based on the leadership requirements.

- Lead in peace to be prepared for war.
- Develop individual leaders.
- Develop leadership teams.
- Decentralize (release authority). (Military Leadership vii)

Replace the words war, battle, soldier, unit, and fight; with the words project, deadline, employee, department, and conflict, the principles of leadership would still be the same. The fourth responsibility, decentralize, is in fact the opposite of the authoritarian behavior. Whether this responsibility is fulfilled depends on the individual leader. Hersey takes perception one step further to describe it as one factor that affects attribution.

Attribution, the judgements we make about the characteristics and behavior of others, plays an important role in cross-cultural communication. Three factors

affect the attributions or judgements we make: perception, stereotyping, and ethnocentrism. *Perception* is the mental process we use to select, organize, and evaluate stimuli from the external environment to mold them into a meaningful experience... *Stereotyping* is a mental form of organizing information about behavioral forms for members of a particular group... *Ethnocentrism* occurs when members of a particular group believe that their cultural values, habits, and beliefs are superior to those of all other groups (Hersey 355).

Action/ Direction

The final application of the Army's principles of leadership is "DO". "Leaders must also provide purpose, direction and motivation to meet the demands of combat," (Military Leadership 45). The reader should again think of combat as corporate take-over for practical application to the business world. The purpose requires communication and clear intent of the mission. Direction is the planning, standards, goals, problem solving, supervision and training. Motivation includes caring for the troops, developing teams and providing effective rewards and recognition for individuals. Deming's definition of transformation requires "direction", the basis of the Plan-Do-Check-Act cycle described in Chapter 1. This direction is described further as the final step of the 14 Points for Management. Action implies movement or momentum, and therefore becomes a continuous process. Sullivan's Leadership Action Cycle is similar, but described differently:

- Observe - What is happening? What is not happening?
- Reflect - What can I do to influence the action?
- Decide - Next, the leader determines how best to go forward to realize the objective.
- Act - The organization then begins to execute the leader's decision
- Learn - ...closes the loop by relating the outcomes of decision and action to the environment *and to future action* (Sullivan 50).

Action can now be related back to behavior and motivation with the idea, "The basic unit of behavior is an *activity*," (Hersey 25). A leader must have some action plan as a result of his

decisions, since every situation cannot be fully predictable. The next step in the process is to understand the outcome of the situation. "Activators are things you have to do before you can expect good performance. Behavior is the performance you want. Consequences are what follow behavior," (Hersey 418). The desired result of any activity is a positive consequence. For Schaefer's position of addiction, the lack of recovery from the addictive behavior of the organization results in a negative consequence. "Workaholism, dishonesty, and control have never led to recovery for an individual and they never will for a corporation," (Schaefer 206).

Sullivan describes "the 'Paradox of Action' as the fact that working harder and harder to do what you do better and better will not lead to success. Action, however intense, is pointless unless it is focused coherently on the future. Action without strategic direction merely drives an organization deeper into a hole," (Sullivan 25). He further describes leadership traps, which are not unlike Deming's Obstacles and the need for strategic direction to use the tools of Total Quality Management.

The process of continuous improvement and customer satisfaction requires a plan or observation about a particular situation, before the action can occur. This would require an understanding of vision, strategy and communication, through effective leadership, within an organizational culture.

Culture - Beliefs, Values and Norms

The United States military is a unique culture, based on its mission. This culture establishes the "BE" of the Army leader and as described before in the Beliefs, Values, and Norms; Character and Professional Army Ethic. "Your ability to lead flows from your individual beliefs, values, and character. Your ability to inspire soldiers to do the brave and right thing - things they may not think they are capable of performing - is influenced by the example you set... Fundamental to what leaders must BE are the moral strength and courage necessary to make hard decisions and to give soldiers the will to fight and the ability to win," (Military Leadership 34). The Army's fundamentals of a leader can be translated to Hersey's Situational Leadership, which

is based on the leader's behavior, the relationship to the follower, the task and the follower's readiness (ability and willingness).

A corporate culture is also based on beliefs, values and norms; which is why Deming, Hersey, Sullivan, Schaefer, etc. are devoted to the process of organizational transformation. Hersey provides the following definition:

Culture is the set of important understandings (often unstated) that members in a society or organization have in common. Culture guides individual and collective behavior. Culture consists of basic beliefs, values, and norms. Basic beliefs and values define what is right and what is wrong; what is important and what is unimportant; what is beautiful and what is not. Norms prescribe how to behave under different circumstances, how to treat different questions. Culture influences how decisions are made, the style of management, and relations and behavior in the organization (Hersey 548).

The reader should read the definitions of transformation at the beginning of this chapter again. Schaefer describes the addition of an organization, which establishes the culture of that organization. Sullivan sees the situation and observes "Effective leaders understand the core values rooted deeply within the people who make up an organization are the essence of its organizational culture and an enormous source of strength," (Sullivan 63). He also understands the need for transformation and "the essential character of strategy is that it *relates ends to means*," (Sullivan 99). Culture and strategy are therefore closely related to the leadership and the decision making process of continuous improvement and customer satisfaction within an organization. It correlates to Deming's second point for management, "Adopt the new philosophy."

Culture is also defined in style of communication and international influence. "Non-verbal communication - gestures, the meaning of time and space, and facial expressions - also varies among cultures," (Hersey 355). The importance of understanding the difference in cultures does not simply cross borders, but the observation might be made between two distinct industries within the United States. "Awareness of attributions we make about a person from another culture, understanding of cultural norms and behaviors, and the use of resources to bridge cultural and

language gaps will aid the leader in achieving effective influential international communication,” (Hersey 356). The cultural gap may be related to communication between different departments of the same organization. Hersey relates Situational Leadership and organizational culture to “the concept for *readiness for transformation* - a concept that has not received sufficient attention in the field of organizational change and transformation,” (Hersey 527).

Vision

The idea of vision is not a new concept for American organizations. Many businesses, “Not for Profit” organizations, etc., have “Mission, Vision, Values” statements, or maybe they say “principles” instead of “values”. Many employees or members may simply breeze past the words, without understanding or appreciating the CEO’s intent. Hersey takes the definition of vision from the work of Warren Bennis and Burt Nanus:

To choose a direction, a leader must first have developed a mental image of a possible and desirable future state of an organization. This image, which we call a vision, may be as vague as a dream or as precise as a goal or mission statement. The crucial point is that a vision articulates the view of a realistic, credible, attractive future for the organization, a condition that is better in some important ways than what now exists (Hersey 543).

Deming has established his vision through the 14 Points for Management in his Chapter 2, “Principles for Transformation of Western Management”. The reader should recall his first point “Create constancy for purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs” (Deming 23). Deming relates value to quality and implies value through understanding the difference between qualitative versus quantitative attributes of the product or service.

Sullivan’s theory on vision is not that a leader have “narrow focus”, but rather, “A leader must have a broad outlook but, when appropriate, must be able to narrow to a laserlike focus. That can be effected only by a coherent strategic architecture that is diffused and embedded throughout the organization... As we’ve seen it, the next step in creating a future is imagining it -

creating a vision," (Sullivan 231). Sullivan describes, "The vision enables the leader to transform 'change' into growth," and applies it to the same theory that he wrote previously, "Strategy is a concept for action that relates means to ends," (Sullivan 231). This strategy relation of "means to ends" is obviously important to his philosophy for it is stated at least twice throughout his book, and again nearing the conclusion of his theories. Sullivan also makes the following observation early in the book:

A Shared Vision...

- Provides a corporate sense of being.
- Provides a sense of enduring purpose.
- Incorporates a measure of success.
- Transcends day-to-day issues.
- Has legitimate meaning to both the present and the future.
- Empowers both leaders and followers to act (Sullivan 80).

It seems appropriate to move into further discussion of strategy at this point, but it is also necessary to provide more detailed analysis on the theories of communication and Total Quality Management.

Communication

Communication has already been discussed in this chapter, but is an important enough topic to require further discussion. "Communication - being able to put the message in a way that people can easily understand and accept," (Hersey 336). Chapter 1 of this paper discussed communication as four parts - reading, writing, speaking, and listening. Sullivan describes "two important tools with which to begin the task (of transformation): *communication* and *demonstration*," (Sullivan 173). There are two important points to make about this theory. First, one of the Army's primary philosophies is to "Lead by Example" or rather "Set the Example". This is demonstration. Hersey also described non-verbal communication and the effect of understanding cultures. This is again, demonstration. Sullivan discusses the importance of learning and therefore describes listening as a form of communication with the following

observation, "learning involves listening and a willingness to change for the sake of growth and improvement," (Sullivan 210). Hersey describes active listening as; "Communication is not only a process of sending messages. A leader must also be skilled in receiving, or listening to, messages," (Hersey 344). Schaefer cautions her readers about the process of communication in an addictive organization,

Communication in the addictive organization is frequently *indirect*. This indirectness takes many forms. People...refuse to state their conflicts openly...they avoid the significant parties...and spend inordinate amounts of time justifying their position...with persons who can lend a sympathetic ear...

Communication in an addictive organization is often characterized by abundant production of paper memos...Complex procedures often mask an inability to communicate...*Written* memos are frequently used...to avoid face-to-face confrontation on touchy issues... *Triangulation* is a characteristic process...(Joe) asks Mary to tell (Sue).

There is a lot of *gossip* in addictive organizations. *Secrets*...usually come from reliable sources... 'knowledge is power'.

...Chris Argyris calls (it) 'skilled incompetence.' This refers to...executives who are skilled communicators...using communication skills to cover up real problems (Schaefer 139).

These forms of communication are precisely what leaders need to prevent in the influence of transformation. The organization as an addict can be related to Deming's points for management to "Drive out fear..." and "Institute a vigorous program of education and self-improvement."

Another form of communication in relation to learning is the After Action Review described in Chapter 1 of this paper. Sullivan also describes the AAR in great detail. "An AAR takes place after every training event. Its purposes are simple: learning, improving, doing better the next time," (Sullivan 191). The AAR asks the following questions, "What happened? Why did it happen? What should we do about it?" (Sullivan 195). In order to prevent a negative attitude and potential miscommunication, it is important for the participants to understand



The purpose of an AAR is not a critique. A critique is merely an assessment of success or failure. *In the AAR process, the establishment of success or failure, sometimes in a very precise (and painful) way, is only a tool with which to learn.* Nor is the AAR intended to fix blame; it is a process designed to improve performance (Sullivan 196).

The key word is “establishment”. An AAR is an opportunity to communicate the situation, learn from the outcome and improve on strengths and weaknesses.

Total Quality Management

The reader should recall the basic definition of TQM from the book Implementing TQM as “continuous improvement and customer satisfaction” for any product or service. Hersey makes the following observation, “Improving product and service quality had been a standard strategy for gaining global market share... First, quality is an essential contributor to organizational results. The second reason is that the role of leadership is particularly important in implementing quality,” (Hersey 504). Sullivan understands the iterative process of improvement and states, “Good leaders must understand that change in their strategic environment is a continuous process,” (Sullivan 29). He values the concept of TQM, but sees it as a tool to be integrated into the action of developing strategy, “But TQM, at its heart, is not necessarily about growing as much as about improving existing processes. If not imbedded in a strategy for the future, TQM can be little more than Making Yesterday Perfect... What is needed are new approaches, new processes, new ways of doing business. To realize that, what is needed is a new perspective,” (Sullivan 37). Deming would embrace this theory, because he sees TQM not as a tool, but as a continuous process. He redefines his 14th Point as “Take action to accomplish the transformation,” (Deming 86). The concept of leadership implies that this action is based on the vision of the organization.

Schaeff describes the addiction of processes, which can be “difficult to name and to change,” (Schaeff 68). She also states that “Anything can be addictive when it becomes so central in one’s life that one feels that life is not possible without the substance or the process,” (Schaeff 119). It may be addictive processes that Sullivan refers to as “Making Yesterday Perfect” and the

need for "new approaches, new processes, new ways of doing business". Sullivan's Rules One and Four, respectively, are "Change is hard work," and "Real change takes real change."

Strategy/ Structure

Each of the authors has established that the development of a strategy is required for a successful transformation of an organization. Some points have been made in reference to foundation and structure. Chase developed "The structure of TQM ... A Model" to establish a visual tool for the implementation of Total Quality Management, described in Chapter 2 of this paper. Chase's model was based on the work of Deming and provides a framework for discussion. The figure (see Chapter 2) shows the foundation for improved communications, the ground floor of teamwork and the walls to support the roof for the process of continuous improvement. Each piece is valued as necessary for the successful implementation of TQM.

The first piece of the foundation is upper management involvement, commitment and leadership, followed by a statement of vision, mission and guiding principles. These pieces require an understanding of the culture of the people and the organization as discussed previously. The final piece for the foundation is training. Deming stated in his 6th Point - "Institute training on the job." Rule Three from Sullivan is "Intellectual Leads Physical", which not only requires thinking by the leadership, but also may require training of the management to understand the issues required for a successful transformation.

The ground floor is teamwork. This has been previously discussed, but Sullivan says it again in Rule Four "Leadership is a Team Sport." It takes leadership to foster such an organization, through the "BE-KNOW-DO" attributes of the Army, or the principles of Situational Leadership from Hersey. "Strategic leadership is the process of creating a future for our organizations. It is a human process, involving first and foremost the leader and the people who make up the organization, working as a team," (Sullivan 230).

The walls and roof are continuous improvement. This is where the teamwork focuses on the people, processes, and internal and external customers of a product or service. Deming says, "Good leadership requires investigation into possible causes," (Deming 115), in relation to

identifying a solution for any situation. In his book, Deming describes numerous tools and implications for solving problems to ensure effective quality systems.

The following is a definition of strategy by Hersey, "A *strategy* is a broad integrated plan of action to accomplish organizational goals; in our frame of reference, the goal is to improve human productivity. Because a strategy is an integrated plan, all of the factors or variables are interrelated. And they all contribute to *performance*, which is defined in the model as achieving or surpassing business and social objectives and responsibilities from the perspective of the judging party," (Hersey 383). Hersey's model of Situational Leadership is also a form of structure, "the four quadrants... represent the four basic transformational leadership strategies as derived from the relative amounts of structuring and inspiring action," (Hersey 532). This model evolves from the basic model described in Chapter 2, into a model based on strategy shown in Figure 4.

LEADERSHIP STRATEGIES

| | | | | |
|---------------------------------|---|----------------------------|--|---------------|
| INSPIRING ACTIONS (HIGH) | S3 | ENLISTING | ENABLING | S2 |
| | facilitate commitment and participate in decisions and implementation | | envision the future and develop the required actions and roles | |
| (LOW) | S4 | ENDORSING | ENFORCING | S1 |
| | sponsor the transformation and monitor progress | | destroy the status quo and implement new structure | |
| | | STRUCTURING ACTIONS | | (HIGH) |

| ORGANIZATIONAL READINESS | | | |
|--------------------------------------|---|---|------------------------------------|
| R4 | R3 | R2 | R1 |
| Versatile Integrated Committed | Perceptive but Divided and Ambivalent | Inept but Co- operative and Concerned | Fixated Fragmented Resistant |

Figure 4: Situational Leadership[®] for Transformational Model (SLT)

Hersey has developed the following points for the organization to embrace the leadership strategies as follows:

- Personal Commitment to the Transformation by the Leadership
- Firm, Relentless, and Indisputable Communication of the Impossibility of Maintaining the Status Quo

- Clear and Enthusiastic Communication of an Inspiring Vision of What the Organization Could Become
- Timely Establishment of the Critical Mass of Support for the Transformation
- Acknowledgement, Honoring, and Dealing with Resistance to the Transformation
- Defining and Setting Up an Organization That Can Implement the Vision
- Regular Communication of Information about Progress and Giving Recognition and Reward for Achievements (Hersey 521).

Another structure for strategy is the Army's Troop Leading Procedures, described in Chapter 1 of this paper. It is a proven process for the purpose of training junior leaders the necessary means for executing a specific mission. The TLPs require leadership, communication, estimates of the situation, teamwork, planning, etc. It is interesting to note that Sullivan does not mention the TLPs in any part of his analysis, although it is a required process of each of the Army's missions. The only reason that it may not be mentioned is that it is a tool effective for developing junior officers and enlisted. A clear understanding of the TLPs may allow an indirect recognition of the process in the book Hope is Not a Method. One such example is Sullivan's description of "The Leader's Reconnaissance - What is happening? What is not happening? What can I do to influence the action?" (Sullivan 47). This type of reconnaissance is a vital piece of the Troop Leading Procedures, which allows the leader to gather information and make a decision about changing the course of action of the mission based on new evidence. Sullivan points out in Rule Six "Expect to be surprised." The leader cannot predict the future, which is why he wrote Rule One, "Change is hard work," and therefore appreciates the importance of the reconnaissance.

Sullivan provides a thought on the challenge of transformation, "A good plan, arrived at quickly and pursued vigorously, is better than a perfect plan, arrived at late or excused poorly. Today's environment demands prompt, vigorous action focused on the critical point, and perfected in the execution. It is an art, not science," (Sullivan 158).

People

A person cannot be a leader without a follower. Deming supports this view as he recognizes the “Deadly Diseases and Obstacles” through the observation, “However, without a management commitment to the personal welfare of its workers, it will be impossible to inspire employees interested in company productivity and product quality,” (Deming 148). Schaefer makes a very realistic observation that, “Ironically, as corporations continue to function addictively, they drive out the very people who would make significant change...” (Schaefer 210). Hersey also describes commitment as the following:

- Commitment to the customer
- Commitment to the organization
- Commitment to self
- Commitment to people
- Commitment to task (Hersey 446)

There are many more points that could be made from the sources on the subject of transformation, leadership, communication and Total Quality Management. The point is clear though, that any type of change is difficult based on human nature, and there is no well-defined recipe to implement such change. “In the final analysis, everything comes back to people. People are not *in* the organization, they *are* the organization,” (Sullivan 240). Sullivan ends his book with a story of respect from the surrender of Confederate troops to the Union Army, led by Gordon and Chamberlain respectively. Ulysses S. Grant chose Joshua Chamberlain’s division to accept the surrender “as a tribute to its heroism,” (Sullivan 240).

Gordon recorded what happened that day at Appomattox:

We were ragged and had no shoes. The banners our Army had borne to the heights of Gettysburg were bloody and in shreds... We were only the shadow of an army, the ghost of an army, and as we marched in tattered, hungry columns between those magnificent straight lines of well-fed men, faultlessly armed and

perfectly equipped, most of us wished, as our great chief did, that we might have numbered with the fallen in the last battle... Suddenly I heard a sharp order down that blue line, and on that instant I saw the whole brigade present arms to us -- to us, the survivors of the Army of Northern Virginia. It was a Maine brigade, comrades, and I confess to you that... I never hear the name of that state but that I feel a certain swelling pride as I reflect that there was an army good enough to deserve that salute -- and another magnanimous enough to give it.

Chamberlain and Gordon, two of America's citizen soldiers, understood the most basic truth: leadership always comes back to people (Sullivan 241).

The implementation of TQM is the most difficult part of the process that moves an organization or system toward continuous improvement and customer satisfaction. The implementation is difficult because of the human factor and the nature of resistance to change. It takes strong leadership and communication skills to influence and advocate the process in order to overcome the potential and predictable obstacles creating a negative perception. The integration of the concepts and processes of leadership, communication and TQM establish an effective tool, as represented in the Army's Troop Leading Procedures and the After Action Review. The application of the TLPs and AAR to influence Alternative Transportation for St. Charles County will be presented in Chapter 4.

Chapter 4

RESULTS

The intent of this chapter is to establish the correlation between the Army's Eight Troop Leading Procedures (TLPs) and the integration of the principles of Leadership, Communication and Total Quality Management (TQM). These processes have been actively working together during the development of this culminating project, with numerous iterations and cycles in effect. The reader should recall that the original mission could change based on new information gathered during the leader's reconnaissance phase of the TLP process. The development of the personal ideas and perceptions will be described as part of the TLP process, due to its relevance in developing the theory of implementing Total Quality Management through the application of the Troop Leading Procedures. It provides an alternative example of the TLPs, and how it can be applied to any situation. The problem statement from Chapter 1 is restated as the following:

Communication is the corner stone to plan, prepare, implement, and evaluate any topic. The use of TQM and TLPs is an effective way to work through this communication process. A topic as complex and possibly controversial as Alternative Transportation requires a well-developed process. Again, the key to make it all work is constant communication. A team can plan all they want, but if the customer doesn't buy the idea, it's difficult to implement a change.

The case study, Alternative Transportation in St. Charles, has established communication with various businesses, organizations, individuals, etc. and generated a momentum that has the distinct possibility to influence the positive change for improved alternative transportation throughout St. Charles County. The processes of Leadership, Communication and Total Quality Management are all working together. The Troop Leading Procedures is a tool taught to every junior leader in the U.S. Army, and expected to be followed by every soldier, from Sergeant to General. The application of this tool can prove to be effective to influence positive change.

EIGHT TROOP LEADING PROCEDURES:

Figure 5 establishes the correlation between the TLPs and integrating TQM. Some parts of the process may not be applicable to independent missions or the iterations within a particular mission. The "Rule of Thumb" in the planning process is "One-Third, Two-Thirds" (1/3, 2/3). This rule applies to using one-third of the available time for planning and two-thirds of the time for execution. Therefore, if a company wants to implement a new system within 12 months, the time for planning should be 4 months, and the execution phase equal to 8 months.

The other tool for planning is "Backward Planning". The planning team ensures the execution date can be accomplished, based on intermediate milestones. For example, a company wants to execute a new system in 12 months, but the delivery time for the equipment is 16 months. The team must decide to pay an extra price for a delivery time of 8 months, or accept a delay in the execution phase. These decisions may have an effect on the original mission. Each of these tools will be discussed as part of the application of the Troop Leading Procedures.

The final tool for effective execution of the mission is the After Action Review (AAR), as described in the previous chapters of this paper. This is an extremely important tool, that is often dismissed, but vital for the establishment of "lessons learned" in the identification of strengths, weaknesses, opportunities and threats of the mission.

What follows are two examples of using the TLPs to manage the processes of integrating communication, leadership and TQM for a specific mission. The first example describes the mission of completing the Master's program at Lindenwood University. This mission is relevant to the case study represented in this paper, because the coursework established the foundation for the second example, the mission of influencing alternative transportation for St. Charles County. A third mission is also developed as a result of the case study, which will be stated, for evidence of how the process works.

**The Implementation of Total Quality Management based on the guidelines of the
U. S. Army's Troop Leading Procedures**

| | |
|---|---|
| <u>Receive the Mission</u> | CEO Commitment Delegate Responsibility Partner with Employees (don't reinvent the wheel) |
| <u>Issue Warning Order</u> | Communicate TQM Model Educate Management - Case Study (don't compare) Advocate the Process, Build Consensus (be available) Remain Flexible (this is a fluid process) |
| <u>Make a Tentative Plan</u> | Establish a Focus Group Mission, Vision, Principles Benchmarking Timeline |
| ↑ <u>Estimate the Situation</u> | Creative Thinking, Storyboarding ← <u>Reconnaissance</u> Analyze the Planning Process ↓ Model Communication Behavior SWOT - Strength / Weakness / Opportunities / Threats |
| ↑ <u>METT-T</u> (Mission, Equipment, Troops, Terrain, Time) | (Total Quality Management, Resources, Employees, Organization, Time) |
| <u>Initiate Movement</u> | Implement Small Changes (think of individuals) Delegate Responsibility Situational Leadership Communication - read, write, speak, listen Begin Seminars and Development |
| <u>Conduct Reconnaissance</u> ⇒ Estimate of Situation | Formal Research Process (root cause, reliability) Communication Audit - facilitate (third party perspective) |
| <u>Complete the Plan</u> | Analyze the Results Define the Process - Communicate |
| <u>Issue Operations Order</u> Situation Mission Execution Command and Signal Service Support | Organizational Strategic Plan (This section left blank for the user's imagination) |
| <u>Supervise - ALWAYS</u> After Action Review | Communicate, Communicate, Communicate Organizations evaluate themselves - Don't critique Seek maximum participation - Ask leading question Maintain focus on training objectives - No sidebar Constantly review teaching points - Record points |

NOTE: Reconnaissance is based on the tentative plan. Information discovered during the reconnaissance is "plugged" back into both METT-T and the estimate of the situation. It can cause a change of plan or even a change of mission.

© 1999 by Elizabeth A. Johnson, P. E.

Figure 5. The Implementation of TQM through the TLPs

Step 1. Receive the Mission: CANDIDATE FOR MASTER OF ART

Iteration # 1: January 1998

This step clearly identifies the primary objective of the situation. It can be a mission assigned by someone else, or a personal mission, similar to this example:

Enroll in the LCIE Master's Program at Lindenwood University. Select the study of Master of Art in Corporate Communications for the purpose of career enhancement and the opportunity to influence the communication process of engineers, architects and contractors in the construction industry. Personal background includes a Bachelor of Science in Civil Engineering and position of Captain in the U.S. Army Reserves.

Step 2. Issue a Warning Order

The warning order is a step that notifies others who may be impacted by the mission, what projects they may begin prior to the completion of the planning process:

Establish the course requirements, based on personal interest, experience and opportunity that will most likely achieve the desired outcome of the mission. Notify employer of intent for personal development and time requirements associated with class attendance and project development.

Step 3. Make a Tentative Plan

The iterations of the TLPs occur mostly through steps 3-5. A tentative plan is established, which provides an agenda to estimate the situation, initiate movement and conduct the reconnaissance. Any of these parts may impact the plan, therefore requiring subsequent iterations. The key is to "get the ball rolling" while the final planning phase is in progress:

The following courses were identified as relevant to career enhancement:

- January-March 1998: Training and Development Cluster, Professor Richardson
- April - May 1998: Organizational Communications Cluster, Professor Kramer
- June - September 1998: Employment Sabbatical
- October - Dec. 1998: Public Relations Cluster, Professor Dehner

- January - March 1999: Product Management Cluster, Professor Silverio
- April - Completion 1999: Culminating Project

(Step 3 Cycle) Estimate the Situation, Jan - April 1998

The estimate is part of step three. The Army has standard doctrine for this estimate, but a corporate organization would have to develop its own methods, such as a “brain storming” session or a SWOT (strength, weaknesses, opportunities, and threats) analysis:

The situation appeared to be conducive to gaining experience and education; therefore a personal commitment to complete the Master’s program was accepted. An opportunity to publish a Peer-Review paper in the Journal of Management in Engineering (JME) provided additional incentive and added more substance to the original mission.

Step 4. Initiate Movement

Momentum begins to develop during this step, as some parts of the process begin, which support completion of the overall mission. Parts of this step may occur immediately following the warning order and becomes concurrent with the other steps:

The following projects were developed as a result of the course requirements and were incorporated into the planning process for the culminating project:

- Training and Development Cluster: “Principles of Leadership - A Guide for Training and Development”. This course reinforced the conviction of personal and professional leadership.
- Organizational Communications Cluster: “A Blueprint for Change - My Personal Development Plan”. This course began the thought process of self-employment and the development of a personal consulting practice.
- Public Relations Cluster: “Implementing Total Quality Management through Public Relations”. This course established the connection between the use of the Troop Leading Procedures in order to implement TQM. It was a common sense approach to apply a proven tool in order to facilitate and influence leadership and communication for engineers.

Step 5. Conduct Reconnaissance

- **Product Management Cluster:** The original plan for this cluster was the development of a marketing strategy for a personal consulting practice associated with leadership and TQM. The course required a three-person project team, and consensus on the case study. The project study resulted in the marketing strategy: "A Public Transit Plan for the City of St. Charles", therefore the strategy for a consulting business would have to be delayed.

The original plan was no longer applicable based on the course requirements, and a new plan was required. In addition, the personal employment situation was changing, which affected the plan for completing the culminating project. This leads into a second iteration of Step 3: Make a Tentative Plan. The reader should recall that some steps may be reduced or occur in simultaneous order depending on the nature of the mission and/ or iteration.

Iteration #2: March 1999

Step 3. Make a Tentative Plan

Two employment opportunities were unfolding at the same time the Public Transit report was being completed for the Product Management Cluster. These opportunities shifted the plan away from the idea of developing a personal consulting practice, but were consistent with the original mission of career enhancement and influence of the leadership and communication process. The following events were then established.

- The Public Transit Plan was submitted to the City of St. Charles, Lindenwood University and the Community Council of St. Charles County for information.
- A 3-month military deployment was accepted, as a Training and Operations Officer on a major highway construction project.
- A position as a quality engineer was accepted for a major corporation following completion of the military deployment.

(Step 3 Cycle) Estimate the Situation, Fall 1999

The new plan (Iteration #2) was to complete the culminating project while gaining experience in quality engineering and systems for the corporation. Mandatory overtime and corporate training programs significantly limited the time available to begin the culminating project, although experience gained in Statistical Process Control was invaluable.

Based on the "1/3, 2/3 Rule", the original mission was behind schedule. The full-time LCIE Master's program, with a culminating project, can realistically be completed in 18-months. The course work was completed in 15 months, and the beginning of the culminating project, 10 months later, was still not in sight. In addition, the corporate position was not conducive for career enhancement, completion of the Master's program, and ultimately publication in the JME. A new plan was required.

Iteration #3, February 2000

Step 3. Make a Tentative Plan

A change in employment (short term teaching assignment) was refreshing and reinforced the personal desire to develop a personal consulting business in a learning environment. The development of culminating project was a slow process, with limited ideas regarding where to begin. An opportunity presented itself in March 2000, with an invitation to a community meeting on the subject of Public Transportation for St. Charles County. This invitation was received by Jim Phillips, Director - Community Council. The meeting included the individuals listed in Exhibit A and the subsequent plan was developed:

- March 2000: City of St. Charles Meeting for Public Transit
- May - June 2000: *Mission statement* for the Culminating Project
- June - Current: Development of Culminating Project
- December 2000: Scheduled Completion for the Culminating Project and Graduation

(Step 3 Cycle) Estimate the Situation, June-August 2000

Preliminary conversations with transportation advocates within the community confirmed the case study of influencing Public Transportation was a possibility, although an indication to focus on St. Charles County rather than the City of St. Charles was quickly identified. This was determined following the writing of Chapter 1 and will require some revision, based on this new focus, for the final draft.

Step 4. Initiate Movement, June-August 2000

The first chapter of the culminating project was written and submitted, with two revisions required, to establish the problem statement and foundation for the completion of the project. At the same time, a network of information was being developed through numerous conversations and interactions with key personnel in business, local government and social service organizations throughout the community. The culminating project continued with submission of Chapter 2 by the first week of October 2000. Chapter 3 was complete by the end of the October. Military training requirements interrupted progress on two occasions, but were relevant in gaining experience in the application of the TLPs.

Step 5. Conduct Reconnaissance, June-August 2000

The information from this step is incorporated into the tentative plan as part of the estimate of the situation. Since some steps are concurrent, it may be difficult to delineate between the steps:

A flowchart of communication networking, which establishes the overall opportunity to influence alternative transportation, is shown in Exhibit B. The outcome of the reconnaissance established a primary resource for influence within the community. Two events occurred as a result of this reconnaissance:

1. Reinforcement of Mission Statement (Chapter 1) and continuation into Step 6.
2. Development of a secondary mission, in parallel with the first. MISSION #2 - INFLUENCEING ALTERNATIVE TRANSPORTATION.

Step 6. Complete the Plan, November 2000

This is the point the adequacies of the tools of planning are identified. A timeline to complete the mission - Graduation - was established. The personal goal is December 2000, three years after the beginning of the first course, with 12 months dedicated to employment. The Culminating Project really began in June 2000, leaving 7 months for completion. Based on the "1/3, 2/3 Rule", the first 3-4 months were used to establish the project, leaving the final 3 months for execution. The development of this project does not follow this rule, which is evident by the "time crunch" to complete the project by December 2000.

The "Backwards Planning Rule" requires more attentive detail. The following establishes the outcome of this planning process:

- December 30, 2000: End of the Fall Quarter - Graduation.
- December 18, 2000: Submit Final Thesis.
- December 11-18, 2000: One week incorporating the Reader's comments into the Final Thesis.
- December 4-11, 2000: One week required for Readers to review/ comment on Final Draft.
- Nov 22 - Dec 4, 2000: Two weeks required to complete/ submit Chapter 5 with Final Draft.
- November 13-27, 2000: Coordinate with alternative sources to review the content of this paper to enhance the discussion of Chapter 5.
- November 13-22, 2000: One week required for Readers to review/ comment on Chapter 4.
- November 10, 2000: Establish the final plan to accomplish the mission.

Another piece of the plan is establishing the foundation for a personal consulting practice. This has been an underlying goal throughout the process of completing the LCIE Masters program and evident in the development of the Culminating Project. This leads into a new mission: MISSION #3 - DEVELOP CONSULTING PRACTICE.

The groundwork for Mission #3 has been identified and committed. It will not be discussed in detail, except to establish Step 2 - Issue a Warning Order. In this step, a graphic artist has been hired to design a logo and company stationery. In addition, the Small Business Administration has been contacted for more information concerning Start-Up loans.

Step 7. Issue the Operations Order, November 13, 2000:

The U.S. Army requires a standard format for the issuance of the Operations Order. It is a format that is easily understood by every soldier and facilitates the communication process. An organizational strategic plan is extremely complex, and corporate culture may not allow the Operations Order format to be conducive for their scenario. In the case of this mission - Graduation - the format will be used, but simplified, as follows:

- **Situation:** Less than 6 weeks are available to complete and submit the Culminating Project.
- **Mission:** Complete the requirements for Master of Art in Corporate Communications, **Graduation Date: December 30, 2000.**
- **Execution:** Follow the plan established in Step 6.
- **Command and Signal:** Communicate with the Readers their requirements to complete the mission. Coordinate with alternative sources to review the content of the Culminating Project as a requirement for the completion of Chapter 5. The professionals identified are:
 - Major John Bracket - Executive Officer, Training Support Battalion, U.S. Army
 - Dr. Gerald Chase - Professor (Retired), Iowa State University; Author - Implementing TQM in a Construction Company
 - Dr. Jeffrey S. Russell, P.E., University of Wisconsin; Editor-in-Chief - "Journal of Management in Engineering"
- **Service Support:** Communicate with employer, family, and friends, the assistance they may provide to assist with the completion of this mission.

Step 8. Supervise - Continuous

Supervision is required during every step and iteration of the TLP process. The management of time is critical and continuous during this process. Communication with the readers is necessary to maintain the schedule in order to create a successful situation. It is necessary throughout the process to evaluate the situation and determine any underlying problems and create a positive learning environment. The After Action Review (AAR) process is the most effective tool to describe the outcome of the mission.

The AAR process in this case is not easily identified, because it is usually reserved for groups of people working together to identify the lessons learned of a particular situation. The best scenario for this Culminating Project would be to gather the readers to discuss the process and identify opportunities to sustain and to improve. Since the AAR is more of an art rather than a science, it will be sufficient to record some of the significant events and thought processes during the development of the Culminating Project.

After Action Review

The AAR should be conducted at each significant event during the TLP process, as determined by the leader of the process. A significant event may be the conclusion of each iteration of Step 3 - Make a Tentative Plan. The difficulty in the processes of the TLPs and the AAR are evident in the development of this Culminating Project. The process itself was forgotten at times, and the understanding of the mission lost. A summary of events and brief discussion will establish this difficulty and correlate the processes to the issues discussed in Chapter 3.

- Introduction - The AAR is a professional discussion intended to identify lessons learned. It is not a critique, but an opportunity to identify strengths and weaknesses.
- Review of Objectives and Intent - The objective is to receive a Master of Art in Corporate Communication. The intent is to develop a case study - "Influencing the Growth and Expansion of Alternative Transportation in St. Charles County."
- Summary of Recent Events - Four clusters of coursework were completed. Several employment opportunities were presented. A Culminating Project was developed as a result of studies in the Product Management Cluster and community interest. Graduation is pending completion of the project.
- Discussion of Key Events - Some of the delay for completing the Master's program was due to the necessity for employment. The need for employment was based on perception at times. Personal obstacles affected that perception, or "deadly diseases" as described by Deming (97). The primary obstacle was procrastination based on fear of failure. Another fear was financial

burden. These fears led to the status quo of working for someone else, rather than following the underlying goal of self-employment with a personal consulting practice.

- Closing Comments - The lesson learned is to overcome the personal resistance to change, based on fear, in order to develop continuous improvement. This would then lead to career enhancement and the influence of the communication process for others.

The AAR identified the strengths and weaknesses, development of new ideas for consulting and the fear of failure, respectively. Once these are identified, the individual or team can determine the next course of action as a result of the AAR process and iterations of the TLPs.

The second mission within this paper will be described next. Steps 5-7 are not complete, due to the timeframe of the project, which extends through December 2001. The foundation for the TLPs will be established with identification of implied tasks necessary for completion.

Step 1. Receive the Mission: INFLUENCING ALTERNATIVE TRANSPORTATION

Iteration #1: June 2000

The case study for the Culminating Project was originally stated in the introduction of Chapter 1 as, "The study for this paper is the growth and expansion of alternative transportation within the City of St. Charles, Missouri... The goal of the project is to identify and implement opportunities for the exiting transit services for the January 2002 fiscal year budget."

Step 2. Issue a Warning Order, June 2000

Mayor Patti York was contacted informally concerning the content of this project and solicited for her support and commitment to the process. She identified Kevin Kast, President, SSM Healthcare and Harlan Pals, Chairman, St. Charles County Economic Development Center (EDC) Board, as key players in the business community, and supported continued communication with the Public Works Department within the City of St. Charles.

Several other leads for networking were also made in this same timeframe. The flowchart indicating this network was discussed in Step 5, Conduct Reconnaissance of Mission #1,

and is shown in Exhibit B. The original paper, "A Public Transit Plan for St. Charles", was distributed to those interested at the community meeting in March 2000, and to others who were interested throughout the process. It was communicated that the content was somewhat out of date and limited to the scope of marketing.

Jim Phillips, Director, Community Council of St. Charles County; and Board Member, County Transit Authority, is a primary advocate for alternative transportation within the community. He initiated the invitation to the March 2000 Transit Meeting. Constant communication with him was maintained to determine new developments within the community.

Step 3. Make a Tentative Plan, June 2000

As the networking opportunities unfolded, several formal and informal meetings were planned in order to gather information and determine the perceptions surrounding alternative transportation in St. Charles City and County. A typical outline for the formal meetings is shown in Exhibit C. Additional information about the departments, organizations, and agencies are discussed in Chapter 1 of this paper.

(Step 3 Cycle) Estimate the Situation, June - August 2000

It was discovered that the County Administration had requested a study through the East-West Gateway Coordinating Council to address the needs, resources and recommendations for Public Transit for the County. Early indication suggested the report would be available to the County Administrator by the end of September 2000. Part of the research process was placed on hold until more was discovered about the content of the report to St. Charles County. It was encouraging to find out that the highest authority in the county is addressing the subject of alternative transportation.

Although the responsibility of the SCAT system is delegated within the City, the Public Works department does not necessarily have the resources or experience to manage such a system. This is why they are developing partnerships with other organizations like Bi-State and using East-West Gateway and the County Transit Authority as resources.

The City of St. Charles has had communication with the citizens through the Mayor's Message and news reports. They have discussed ideas to expand the hours of operation, provided drivers and a fifth bus are available. A copy of the times and routes are available by calling the Public Works department directly. There is currently no information on the City Website.

The cities of St. Peters and Wentzville are planning to purchase buses by 2002, so the impact on incorporating the systems with St. Charles and beginning the development of a countywide system is becoming a topic of conversation within the community.

The reader should note the established timeline in the original mission statement. The goal was to implement opportunity for the City of St. Charles by January 2002. That is approximately 18 months from the start of the project, June 2000. This would mean that the planning phase should take 6 months, with the execution phase at 12 months.

Step 4. Initiate Movement, June - August 2000

The following organizations were identified, with individual meetings scheduled or invitations to existing meetings were extended for information:

- June 26, 2000 - Rick Lewis, Traffic Technician, Public Works Department, St. Charles
- July 27, 2000 - Nadine Boon, Director, Department of Economic Development, St. Charles
- August 11, 2000 - Herman Elmore, St. Charles City Council
- August 14, 2000 - Kevin Kast, President, SSM Healthcare
- August 14, 2000 - Nancy Stuenkle, Director, St. Charles Chamber of Commerce
- August 31, 2000 - Legislative Workshop, St. Charles County Area Councilmen and Aldermen
- September 8, 2000 - Rick Lewis, Public Works Department
- September 8, 2000 - St. Charles Chamber of Commerce, Transportation and Economic Development Committee Meeting

Step 5. Conduct Reconnaissance, June - August 2000

The information gathered has affected the plan and caused an overall change in the mission. First, there is general consensus within the community for a countywide system, although

many of the conversations, meetings and related news articles established perceptions, hearsay, and comments indicating resistance to communicate and work with particular departments, organizations and agencies. The concept of a private transportation system has been suggested, but is often rejected for reasons that can only be speculated.

Second, it is perceived that the City of St. Charles Public Works Department is resistant to change, based on a fear of loss of control. The Department of Economic Development is waiting for Public Works Department to request funding for marketing. It is not understood why the City of St. Charles has not established a vision, mission statement, or marketing plan.

The business community has shown an active interest to influence the development of public transit throughout the County. The intent of SSM Healthcare is to develop a plan, in order to apply pressure and influence the municipalities to accept change. A new mission statement has been developed as a result of this reconnaissance.

It should be noted that the same timeline as the original mission is established. The intent is to gain the commitment from the community leaders within the first six months (January 2001), and influence the decisions of these leaders concerning positive change for alternative transportation by the 2002 fiscal year. This plan follows the "1/3, 2/3 Rule".

After Action Review

A brief AAR will be completed at this time, since a significant event in the change of the mission occurred. It will be less formal than previously described, which is normally acceptable as the discretion of the leader or facilitator.

What happened during the first iteration of the mission was the identification to expand the case study to include all of St. Charles County. Although there is opportunity for growth and expansion of the City of St. Charles current transportation system, there is obvious need throughout the County. It was identified that the greatest opportunity was to study the entire region of the county to best serve the needs of the community. This is called the "common sense" approach, which is typically the preferred method for any mission. This leads to restated mission:

Step 1. Receive the Mission: ALTERNATIVE TRANSPORTATION WITHIN THE ST. CHARLES COMMUNITY, Iteration # 2: August 2000

A Scope of Work was developed for Kevin Kast, President, SSM Healthcare St. Charles, as shown in Exhibit D. The Executive Summary clearly states: The intent of this project is to develop a comprehensive plan for the purpose of influencing the growth and expansion of alternative transportation within the City of St. Charles and into St. Charles County. The focus is on public transit (buses) not mass transit (trains). The goal of the project is to establish a foundation of information, develop short-term solutions and long-range plan, and influence decisions related to alternative transportation for the January 2002 fiscal year.

Step 2. Issue a Warning Order

SSM Healthcare presented the proposal to the St. Charles County Economic Development Center (EDC), to develop a partnership to support the payment for consulting services. Subsequent meetings provided an opportunity to communicate the intent of the Culminating Project, Scope of Work and personal qualifications to manage the process.

Step 3. Make a Tentative Plan

SSM Healthcare and the EDC agreed to the Scope of Work and requested additional information concerning the project. The resulting Plan of Action for "Influencing the Growth and Expansion of Alternative Transportation in St. Charles County" is shown in Exhibit E. The intent is to present the information at the November 17, EDC Board Meeting. The suggested Work Plan will also be coordinated and scheduled. The Plan of Action is formatted in the Eight Step TLP process, with implied tasks for completion.

Step 4. Initiate Movement

Kevin Kast has provided an initial presentation of the proposed Plan of Action to the EDC board on November 17th. The intent to provide the board with a "Warning Order" about the situation and potential opportunities for the Partners for Progress to participate in the influence of

alternative transportation within St. Charles County, with a more detailed presentation provided in the December meeting.

Step 5. Conduct a Reconnaissance - See Exhibit E

Step 6. Complete the Plan - See Exhibit E

Step 7. Issue Operations Order - See Exhibit E

Step 8. Supervise

The process of communication is vital. The individuals identified in the Work Plan, based on the Plan of Action, are in positions of higher authority, and may or may not be available or fully committed to the process. The process may also be delayed as a result of the upcoming holidays. This results in the need for constant communication in order to keep the process moving forward, rather than becoming stagnated. Effective leadership is critical to influence the process and will result in successful completion of the Scope of Work.

After Action Review

It is appropriate to complete an AAR at this point, since movement has been initiated, which may be considered a significant event by the facilitator. The AAR can benefit by identifying opportunities to increase the movement, and complete a "reality check" to ensure the process remains in line with the mission statement.

- Introduction - The AAR is a professional discussion intended to identify lessons learned. It is not a critique, but an opportunity to identify strengths and weaknesses.
- Review of Objectives and Intent - The objective is to develop a comprehensive plan for the purpose of influencing the growth and expansion of alternative transportation within St. Charles City and County. The intent is to establish a foundation of information, develop short-term solutions and long-range plan, and influence decisions for the January 2002 fiscal year.
- Summary of Recent Events - An invitation to a community meeting on the subject of Public Transit for St. Charles County was extended. Communication with numerous government

departments, businesses and organizations was generated. Identification of opportunities and potential obstacles were determined. The original mission changed. A Scope of Work and Plan of Action was developed.

- Discussion of Key Events -

The idea to link Leadership, Communication and Total Quality Management with the case study to influence Alternative Transportation provided the necessary enthusiasm to complete the Culminating Project. It was difficult to begin, with no obvious contacts to start. The initial contact with Mayor Patti York occurred on the street of the Frenchtowne Fleur d'Lis Festival in June 2000. This began the "ball rolling". Other contacts were made, and the development of a real project became a reality.

The communication with various departments, organizations and agencies has provided the insight for the most difficult part of the process yet to begin. It is apparent where much of the resistance to change will occur, based on the situation, perceptions and the simple lack of time available for individuals to make a commitment. A clear understanding of the issues described in Chapter 3 is critical to influence positive change in a system. Because the situation is so complex, it cannot be predicted what the outcome will be. But, with an understanding of the human behavior aspect of leadership and communication, the ability to influence the continuous improvement is greatly increased.

The opportunities and potential obstacles are consistent with the conclusions from Chapter 3. It would be appropriate to develop a matrix, based on the concept of Situational Leadership[®], as the Conduct Reconnaissance Step of the mission progresses and potentially affects the Tentative Plan and develops another iteration. It is unfortunate that more time is not available to evaluate this development, but the estimated time cannot be predicted, based on the factors influenced by the other participants. The early indication is the following:

1. Organizations actively interested in the process
 - Economic Development Council (Partners for Progress)
 - Community Council of St. Charles County
 - Legislative Workshop
2. Organizations passively interested in the process

- City of St. Charles Department of Economic Development
 - St. Charles County Planning Department
 - Bi-State Development Agency
3. Organizations resistant to the process
- St. Charles City Public Works Department

The change in the mission from influencing St. Charles City to influencing the County through the business community is encouraging, because the perceptions within the community may be changing on their own. The intent of this project can possibly increase the speed of the process for change and implementation of an alternative transportation system throughout the County. The developed Scope of Work for SSM Healthcare has led to a commitment by their administration, and that of the Economic Development Council to take the lead within the community to influence the development of alternative transportation systems. This indicates that the process is working, because a commitment of a higher and influential authority has been made. The additional opportunity is the development of a personal consulting practice. The process of the Troop Leading Procedures is effective to make this mission a reality as well.

- Closing Comments -

Flexibility is a must because not everyone is going to see "the big picture" the same way, even if "you are preaching to the choir". Even advocates of a great idea can be handicapped by perception if they don't have all the facts, and therefore are unable to build consensus. This is why the Troop Leading Procedures work and the reconnaissance of information is required before the final plan can be complete.

The greatest lesson learned from this project is that everything takes more time than originally estimated. The second lesson is that not everyone has the same priorities, therefore communication can be delayed and frustration begins. Other lessons are that of overcoming procrastination, following up with contacts, and keeping an accurate record of events..

A strength that has been identified is the ability to convey the enthusiasm for the project and encourage others to commit to the process. Simple brainstorming activities have proven effective in communicating the ability to make small, inexpensive changes that can have a positive

influence. Another strength is the ability to listen to others, think through the process of communication and provide the leadership necessary for change.

A weakness that has been identified is the reluctance to work with those who are most resistant to change. This is due mostly to a lack of time available, and a lack of communication with the highest authority. In this case, the Public Works Department is resistant to change, but any follow-up communication with Mayor York has not occurred up to this point. This issue has been identified, and a plan is in place to rectify this situation. Another weakness is the ability to stay on track with the TLPs, even during a project where it is a primary point of discussion. These weaknesses are human nature, and indicate why change is difficult to manage.

SUMMARY:

There are many points that can be made about the process of the Troop Leading Procedures, the After Action Review, and implementing Total Quality Management through these processes. Leadership and communication are implied throughout the process. The transformation described in Chapter 3 is not exactly evident throughout the discussion in this chapter, but that is the point. Transformation cannot occur overnight, especially with so many entities considered in this process. There is a definite link among the principles of Leadership, Communication and Total Quality Management. Unfortunately, it is perceived that the management of change is difficult without a process to follow. The references from Chapter 3 establish a foundation for understanding the challenges of any transformation, but none of them provide a standard to overcome these challenges. The Troop Leading Procedures are a proven method to manage the process of accomplishing a mission. It can be applied to any situation and should be considered for the purpose of influencing continuous improvement and customer satisfaction.

Exhibit - A

COMMUNITY TRANSIT MEETING ATTENDANCE, MARCH 2000

| Name | Company/ Association |
|-------------------|---|
| Tim Baker | City of St. Charles |
| Rick Lewis | City of St. Charles |
| Denise Liebel | North East Community Action |
| Patti York | City of St. Charles |
| Mark Huffer | Bi-State |
| Susan Stauder | Bi-State |
| Bill Jurkiewicz | Care Cab Transportation |
| Larry Welty | MoDOT |
| Elizabeth Johnson | LCIE Student |
| Jim Gremand | MoDOT |
| Jeff Hustler | City of St. Peters |
| James Phillips | Community Council |
| Debbie Freund | MEAAA |
| Judy Naeger | Community Living, Inc. |
| Sandy Gray | Lake St. Charles |
| Jerry Eddington | START |
| Cathy Gillies | City of St. Peters |
| Amy Haddock | City of St. Peters |
| Bill Charmisky | City of St. Peters |
| Mark Hunger | Crider Center's Headway |
| John Fletcher | Crider Cinter - Wentzville |
| Richard Harkricek | Crider and Mo. Mental Health Consumer Network |
| Shirley Kirkland | START |
| Edna Freemon | Missouri Council of the Blind |

Exhibit - B

FLOWCHART/ TIMELINE OF NETWORKING

- March 2000 - Community Meeting, Jim Phillips
 Tim Baker (Public Works), Susan Stauder (Bi-State), Mayor York (St. Charles)
- June 2000 - Mayor York
 Harlan Pals (EDC Board Chairman), Kevin Kast (SSM Healthcare, EDC Board)
- June 2000 - Glen Bishop (Neighbor)
 Kevin Kipp (PR Practitioner), Peter and Marilyn Geery (Neighbors)
- June 2000 - Kevin Kipp
 Kevin Kast (SSM Healthcare), Nadine Boon (City Economic Development),
 Gary Podhorsky (County Planning)
- June 2000 - Jim Phillips
 Jeff Sauter (UPS), Sally Faith (County Council), Herman Elmore (City Council)
- June 2000 - Workforce Development, Gary Antal
-
- July 2000 - Care Cab, Ride Finders, OATS
- July 2000 - East/ West Gateway Coordinating Council, Jim Wild
 Regional Grant Funding
- August 2000 - Kevin Kipp
 Sally Faith, John Dunkle (Chamber of Commerce member)
- August 2000 - Sally Faith
 Legislative Workshop (Transportation, Affordable Housing)
- August 2000 - Marilyn Geery
 Nancy Stunkel (Director - Chamber of Commerce)
 Gary Elmestad (Transportation Committee Chairman)
- August 2000 - Kevin Kast
 Harlan Pals, Greg Prestemon (President - EDC)
- September 2000 - Military Training Obligation, No Contacts during this time
- October 2000 - Kevin Kipp
 Steven Powell (Director - Tourism)
- October 2000 - Kevin Kast, Greg Prestemon
 Develop Plan to meet with Mayor York, Sally Faith, Jim Phillips (major players)
- October 2000 - Jim Phillips, Gary Podhorsky
 East/ West Gateway Transportation Study Report, Alan Walls

Exhibit - C

TYPICAL MEETING AGENDA

June 26, 2000

City of St. Charles - Public Works Department

Attendance: Elizabeth Johnson
Tim Baker
Rick Lewis

MEETING AGENDA: St. Charles Area Transit

1. Goals for Alternative Transportation within the City
 - a. Commitment
 - b. Mission statement
 - c. Vision for future
2. Statistics for current use of SCAT
 - a. Current users - purpose, frequency, need
 - b. Employers - needs, location
 - c. Consumer Service/ Retail/ Entertainment
3. Existing resources/ opportunities to enhance the System
 - a. Marketing existing service - Brochure, Website, Service Mailings
 - b. Partnerships with other organizations
 - c. Multiple transit services available
 - d. Survey residents for needs
4. Brainstorm long range planning
 - a. Committee for Focus Group
 - b. Business Strategy
 - c. Milestones/ Benchmark
 - d. Proposals to implement changes

Exhibit - D

PROPOSAL FOR CONSULTATION**Alternative Transportation within the St. Charles Community****Executive Summary:**

The intent of this project is to develop a comprehensive plan for the purpose of influencing the growth and expansion of alternative transportation within the City of St. Charles and into St. Charles County. The focus is on public transit (buses) not mass transit (trains). The goal of the project is to establish a foundation of information, develop short-term solutions and long-range plan, and influence decisions related to alternative transportation for the January 2002 fiscal year.

SCOPE OF WORK**Phase 1 Research and Report - foundation of information and planning**

Communicate with service organizations, communities and businesses with direct interest in transportation planning. Identify and participate with existing committees and action groups as needed as a source to gather information. Develop a final report from information published in the thesis for Master of Science in Corporate Communication from Lindenwood University.

Phase 2 Plan and Prepare - develop short-term solutions and long-range plan

Present initial proposal to the St. Joseph Health Center and the St. Charles County Economic Development Council as major supporters for this project endeavor. Establish commitment from service organizations, communities and businesses to recognize and contribute participation to a focus group meeting. Create an initial focus group of 5-6 people to participate in a brainstorming activity to develop a mission statement, short-term goals and a long-range plan. This activity would be a half-day seminar format.

Phase 3 Implement and Evaluate - influence decisions for growth and expansion

Expand the initial focus group as needed to delegate responsibility, facilitate communication and submit periodic reports to the consortium of organizations, communities and businesses actively participating in the project. Evaluate the decision making process in order to ensure the effectiveness of the proposed growth and expansion of alternative transportation in the area. Submit an annual report of progress.

Exhibit - E
PLAN OF ACTION

November 3, 2000

I Vision, Mission and Process

Vision:

Develop a public transit system that provides a convenient, safe, cost-effective method of alternative transportation for the residents, service organizations, businesses and tourists of St. Charles City and County. Make public transit available throughout the County from 6:00 AM - 6:00 PM, Monday - Saturday within 5 years. Increase passenger count and revenue of the current St. Charles Area Transit (SCAT) system by 75% by January 2002. Reduce traffic congestion and environmental impact on the community.

Mission:

Provide leadership and communication to influence the continuous improvement of alternative transportation in St. Charles County. Challenge the perception that growth and expansion are only possible with large government subsidy and public taxes. Implement a communication process between various organizations to identify innovative solutions, which increase revenue, passenger count, and shared resources for public transit throughout the community. Facilitate the decision making process of the municipalities to adopt and promote a collective public transit system.

Recognize that effective leadership and communication are required to minimize the potential resistance to change, the perceived risk of introducing alternative transportation to the community, and the fear associated with an unpredictable future. The goal of the culminating project is to establish a foundation of information, develop short-term solutions and long-range plan, and influence decisions related to alternative transportation for the January 2002 fiscal year.

Leadership and Communication Process:

1. Gain the commitment from the highest authorities within the community - County Administrator, County and City Councils, Mayors and City Administrators, Business Leaders, Social Service Organizations, Colleges, Etc.
2. Advocate the process of leadership, communication and total quality management. Allow flexibility in the process of influencing alternative transportation and economic development. Focus immediately on short-term (2-year) solutions.

3. Establish a committee to "brainstorm" ideas, develop community vision, mission and principles for alternative transportation, and benchmark the process based on other community successes. Estimate the current and future situation. Identify organizational needs, resources and goals; and determine how to optimize the strengths and opportunities within the community.
4. Implement current opportunities to affect positive change, based on the "brainstorming" activity, which might include updated routes, marketing strategies, and public news releases within the community.
5. Research opportunities for grants and subsidy to enhance the growth and expansion of alternative transportation. Conduct a survey of consumers, businesses and government agencies.
6. Analyze the results, as the process is growing and changing. Develop a clear definition of the process to continue communication with the public, businesses and local government authorities.
7. Complete a 5-year strategic plan for the County and a 10 to 20 year master plan.
8. Communicate - Identify lessons learned, provide constant evaluation of the process, maintain focus on the vision, and seek maximum participation for effective leadership and delegation of responsibility.

II. Situational Analysis

Political Situation:

St. Charles County Transit Authority - This committee is appointed by the County Executive, Joe Ortwerth, to serve as the governing body to manage tax dollars gathered by the public, and to coordinate information that affects the community on transportation issues. They facilitated the Prop M proposal on the ballot in 1996 for the Metrolink expansion, which was voted down by the citizens of the County.

East-West Gateway Coordinating Council - This is the Metropolitan Planning Organization of the St. Louis area, with a Board of Directors comprised of locally elected officials and regional leaders, and several Advisory Committees made up from community leaders from both the public and private sector. The four departments are Administration, Transportation Planning, Planning and Information Services, and Policy and Programming.

St. Charles Legislative Workshop - This committee has been organized for more than two years and includes all of the County Council, and City Council and Aldermen within St. Charles County. Their purpose is to influence opportunities that affect all the municipalities within the County, without the participation of Mayors and City Administrators. The current subcommittees include Planning and Zoning, Transportation, Animal Control, TCI Task, Affordable Housing and Cultural Arts Center.

St. Charles City Chamber of Commerce - The Chamber of Commerce has a Transportation and Economic Development Committee that meets monthly and is chaired by Gary Elmestad. The primary discussions on transportation include the progress of new State and City roads and bridges, with a few updates from Public Works on the St. Charles Area Transit system.

Current Transit Situation:

St. Charles City is the only municipality with a public transit system in operation, with 4 buses and 1 trolley. The number of passengers in 1999 was 35,835, with more than half over the age of 62. St. Peters and Wentzville are currently moving forward to purchase buses and implement a transit system within the next two years. O'Fallon has not actively pursued any planning on the issue.

A report from an independent consulting firm has completed a study of transportation needs and resources of St. Charles County. This was made possible through the East-West Gateway Coordinating Council and has been submitted through the County Transit Authority to the County Administrator. The primary recommendation of the study is that an independent broker manages the administration of transportation issues throughout the County.

The organizations most frequently contacted by the County Transit Authority about any transportation issues, are the service providers (OATS, Care Cab, Ride Finders) and social service organizations (Emmanuel Homes, JESS, etc.). The most recent meeting was in September to discuss the potential for a public vote for a tax increase to support public transit in St. Charles County. Another meeting will be scheduled probably after the first of the year to discuss the information received from the East-West Gateway report, after Joe Ortwerth reviews the information and makes his own conclusions.

Potential Obstacles:

The St. Charles City Public Works department has indicated a resistance to change in the current operation of the SCAT system and Trolley. They do not want to "take away any service" from any customer by changing any of the routes. They have not considered any opportunity with the recent

opening of the Hawk's Nest overpass as a beneficial corridor to improve the system. They also believe that growth and expansion is not possible without large government subsidy or grants. The Main Street trolley is often empty and has not been identified as an asset for residents, but rather tourists only. The Public Works and Economic Development departments have not discussed a marketing plan for the SCAT system, although the Economic Development department appears to be willing to pursue this option at the request of Public Works.

The preliminary feedback from Jim Phillips about the content of the East-West Gateway report is that the use of a broker to manage the process of communication would not be possible without the availability of grant money to pay the salary of such a position. This could cause the loss of any momentum gained during the development of the study and report and prevent immediate progress on transit issues. Communication from the County Transit Authority tends to be a large-group format, with limited action items identified.

Opportunities:

Mayor Patti York appears interested in the prospect of growth and expansion of public transit in St. Charles. She has the opportunity as a leader to bring together the City Administrator, Economic Development and Public Works departments to influence the change required to make the current SCAT/ Trolley systems more efficient and appealing to the public as an alternative method of transportation.

The County Legislative Workshop has not had any recent activity with their transportation committee, chaired by Herman Elmore, St. Charles City Councilman. Workshop Chairwoman Sally Faith is encouraged by the potential opportunity for a collective transportation plan for the community and can provide influence with the council members to reinstate this committee. She sees that public transit and affordable housing are tied closely together.

The Community Council of St. Charles County is a service organization that provides coordination with other organizations and agencies related to social services, volunteerism, etc. Director Jim Phillips is a transportation advocate and has been appointed by Joe Ortwerth to serve on the County Transit Authority committee. Jim Phillips is a key player in the community in any discussion on alternative transportation.

Partners for Progress, through the Economic Development Center, appears to have the need, resources and insight to influence alternative transportation planning in St. Charles County, either through public or private opportunities. They could provide an immediate opportunity to support alternative transportation.

St. Charles City Chamber of Commerce - Director Nancy Stuenkel believes that any change takes about 20 years, and that St. Charles is about 5 years into the process of influencing alternative transportation in the community. She supports the need for public transit in St. Charles. The transportation and economic development committee could be influential on the City of St. Charles in the future.

III. Work Plan

A preliminary discussion with the County Executive would be beneficial, in order to receive more information on the content of the East-West Gateway Report and his vision for alternative transportation throughout the County. The distribution of this report is at his discretion. His perception of public transit is unknown at this time.

The following individuals have an opportunity to provide influence and should have the Part I: Vision, Mission and Process presented to them in a working lunch format. It is recommended that a preliminary package be provided with information and an agenda.

| | |
|--|-------------------------------|
| St. Charles County Executive: | Joe Ortwerth |
| St. Charles County - Legislative Workshop: | Sally Faith and Herman Elmore |
| Mayor of the City of St. Charles: | Patti York |
| County Transit Authority/ Community Council: | Jim Phillips |
| Economic Development Council: | Greg Prestemon |
| Partners for Progress: | Kevin Kast |

The outcome of this meeting should establish a commitment to move forward with the leadership and communication process, to advocate the growth and expansion of public transit within St. Charles City and County. Another outcome could be a solution to establish the method to broker the process according to the recommendation of the East-West Gateway report.

Chapter 5

DISCUSSION

Developing a method to integrate the three processes of communication, leadership and Total Quality Management has been the focus of this paper. The ultimate intent has been to establish a link for the purpose of influencing the growth and expansion of alternative transportation in St. Charles County. The principles of TQM include continuous improvement and customer satisfaction for an organization or system. In this case, the organization is the St. Charles County community and the system is alternative transportation. The literature review from Chapter 2 established a constant theme of the difficulty of implementing TQM and the keys to success are leadership and communication. The evaluation of research in Chapter 3 established the theory of transformation within an organization as the means to overcome obstacles related to resistance to change. The Troop Leading Procedures and After Action Review were used in Chapter 4 to establish a tool to provide a link between communication, leadership and TQM, and manage the process of influencing alternative transportation in St. Charles County.

The results of influencing alternative transportation, in the application of the TLPs and AAR, in the implementation of the TQM process are inconclusive at this time, due to the nature of a multi-year timeline and the need to overcome long standing obstacles. The primary obstacle for developing the mission to influence alternative transportation has been priorities and lack of time of the higher authorities to influence. This certainly does not limit or even dismiss the concept. Numerous examples can be used to demonstrate how the process can be applied and interpreted, as shown in example of the Masters Program and developing the idea for this case study. The keys to completing the process are maintaining focus on the mission and continuing to use effective leadership and communication in order to implement TQM through the TLPs.

Comments on Chapters 1 through 4 from two outside sources have been received. Dr. Jeffrey Russell suggested, "that you consider some means to evaluate the effectiveness of this (TLP) approach." Dr. Gerry Chase felt the content was "more 'qualitative' than 'quantitative'."

He was concerned that there may be a need for "the student (to) prove a hypothesis using statistics." Major John Brackett was unavailable for final comment, but conversations with him in July 2000 indicated that he believed the concept of applying the TLPs to TQM was feasible.

There is no doubt the process mostly is qualitative, because the greatest independent variable is human behavior in both of the aspects of leadership and communication. The effectiveness of the approach was implied but not detailed and may be determined, however, from the observation of changing perceptions and improved communication within an organization. Perception is subjective and the overall process cannot be predicted. It is difficult to establish the separation of tangible versus intangible improvement, although the difficulty should not prevent the process from working. The difficulty itself can become an obstacle and create the perception that "this is just another program," doomed to fail.

Total Quality Management is the process of continuous improvement and customer satisfaction, which requires a transformation in the corporate culture or lifestyle, in order to be truly implemented. The leadership of the organization would need to communicate the mission and choose a style based on the situation. This requires an understanding and recognition of human behavior and motivation, and the perception of others. A strategic plan would result, based on the vision of the organization. It is believed that the TLP process is logical and appropriate, and can be effective for all leaders with proper training and understanding of the situation. An effective way to indicate this may be through the evolution of leadership strategies from the theory of Situational Leadership[®]. The best example is to describe the communication within the St. Charles County community and evaluate the information gathered. Another tool for evaluation is Statistical Process Control (SPC), which can be included in "Complete the Plan." This tool will require detailed structure, with measurable activities. Deming's Plan-Do-Check-Act (PDCA) cycle may also be used for a specific activity. The AAR is the final tool.

From the perspective of human nature, the success of the application of the Troop Leading Procedures comes from the belief that it works. This belief may be a weakness, based on a biased opinion without specific evidence. Perhaps further peer review is appropriate to advocate the application, by influencing the perception of others, that military leadership is not always a

directive style, but requires delegation of authority in order to complete a successful mission. The theory of applying the TLPs to implementing TQM was developed prior to the final research of this paper. Most of the references remained the same, with new references only solidifying the theory. These references were Hope is Not a Method, additional articles from the Journal of Management in Engineering, and new theories on leadership and marketing concepts derived from Drucker. The strength of the theory of TLPs to implement TQM comes from the proven application in military missions and more detailed analysis of Deming's theories. The cornerstone of the military is leadership and successful missions cannot be complete without communication. The military uses the After Action Review to identify lessons learned. The recommended format is designed to allow the leader the most effective method to identify strengths and weaknesses. All of the sources researched for this paper have similar and overlapping theories. Some of the theories have specific applications and are incorporated into Figure 4.

The benefit of applying the concepts of this paper to a realistic case study, has already been evident in the ability to stimulate communication among parties that might have otherwise been delayed six (6) months to a year. For example, SSM Healthcare has vested interest in the growth of public transportation to support their employees' needs. The president, Kevin Kast, of SSM Healthcare is on the board of the Economic Development Council (EDC), with St. Joseph Hospital being a member of Partners for Progress. Mr. Kast was unaware of the East-West Gateway Coordinating Council as a whole, let alone the transportation study that was completed during the same timeframe as the development of this paper. He would have eventually understood the situation, through the EDC Board, but now he can play an active role in the development of a plan of action for St. Charles County. His involvement has led to conversations with the United Way, in which a different transportation study is currently in progress. The United Way was not previously considered as a resource for this paper, but has beneficial information to incorporate into the plan. In addition, the EDC was able to communicate with East-West Gateway to have the business population included in the study, which was not previously forecast for the final report. Consequently, Partners for Progress has become a key player in the implementation of alternative transportation for St. Charles County.

As a result, there is an opportunity to leverage the experience, perspective, findings and vision of the respective parties. This information will be included in the "Conduct a Reconnaissance" phase of the TLPs and therefore provide another iteration of the "Tentative Plan". An effective plan to develop this leverage can only create a win-win opportunity, as long as the process maintains strong leadership, communication and quality management. A recent news report discussed the rising cost of automobile transportation for families. The report described that some of these costs are greater than the cost of a home mortgage. An increasing trend in many parts of the United States is the need for alternative transportation and St. Charles County is no exception.

The details of the East-West Gateway report are confidential at this time, but a copy has been provided by the EDC (through the County Administrator's office) for limited use of information within this paper. It can be reported that the details include current and predicted transportation needs, community demographics and offers feasible recommendations. The primary recommendation is the use of a broker to manage the process for an effective transportation system of social service organizations. It suggests the need for leadership through an advisory council. This recommendation is not unlike any theories presented in Figure 4, "The Implementation of TQM through the TLPs."

It is interesting to note that the East-West Gateway report did not identify any existing transportation committees in the county (Legislative Workshop or Chamber of Commerce), nor did it include information about the United Way or Ride Finders, a local transportation broker company. It did provide detailed information on all of the service organizations described in this paper, as well as several smaller social service organizations. One note should be made about Ride Finders.

The opportunity for consulting for the EDC and SSM allows for a comparison and contrast between the findings of this paper, the East-West Gateway report, and the preliminary findings from the United Way. Although a focus group has not been established, progress is being made through the evaluation of the reports. Another iteration should establish the advisory council as described from the East-West Gateway report. A meeting with the Director of the EDC and

President of SSM Healthcare is scheduled for December 18, 2000 to evaluate the current situation, review the "tentative plan" and make adjustments as required. This meeting can be considered an AAR, based on the agenda. The key is to ask leading questions as an effective means to draw out the information from the participants and solidify their position on the situation.

The Troop Leading Procedures are not a rigid format. It requires flexibility, hence the iterations. Understanding the processes of the TLPs allows the leader to establish a vision, develop a plan for the mission, and manage the process through effective leadership and communication. The following tools are shown to evaluate the effectiveness of the theories presented in this paper:

SITUATIONAL LEADERSHIP:

- ENFORCING (S1) - The City of St Charles. It is observed that the city is the most resistant to change due to its lack of vision and commitment to develop a mission statement. The city will need to be directed by some outside organization, such as the demand service of the community as the system grows throughout the rest of the county.
- ENABLING (S2) - SSM Healthcare and Economic Development Council. Each is willing to explore new options and make preliminary investments. Their commitment may move Partners for Progress directly toward Endorsing through education of the situation.
- ENLISTING (S3) - Legislative Workshop. There is a transportation subcommittee that understands the issues and has commitment, but needs a "push" to get the issue higher on the priority list. The political nature of the workshop may adversely affect the subcommittee as other organizations advocate transportation and apply pressure within the community.
- ENDORSING (S4) - Community Council of St. Charles County. The Director of the Community Council is an advocate of alternative transportation and is currently working with social service organizations to help improve the situation. The only limitation for this organization is a lack of funding and additional resources.

STATISTICAL PROCESS CONTROL:

The application of SPC requires specific knowledge in the collection and analysis of data, and the ability to influence change in the system based on interpretation of the data. The person responsible should have the credential of Certified Quality Engineer (CQE) or Manager (CQM). These credentials were described in Chapter 2. The data collected would be quantitative, such as number of riders, operations and maintenance costs, number of inquiries from the community requesting service, etc. The CQE would prepare control charts that indicate trends in order to identify improvement, stagnation or problems. These control charts would help identify specific items to focus attention in order to facilitate improvement in the system. The CQE position would most likely be full time, with a salary of approximately \$60,000.

PLAN-DO-CHECK-ACT:

The PDCA Improvement Cycle can be used to evaluate a specific item, independent from others identified. Examples of specific items are the selection of an advisory council, evaluation of the existing transportation systems, or employment of a brokerage firm, each described in the East-West Gateway report. It would be premature to predict the outcome of any item at this time. The steps listed in Chapter 1 are restated below. The PDCA Cycle is similar to the AAR.

1. PLAN - what could be the most important accomplishment of this team? What changes might be desirable? What data are needed? Are new observations needed? Does a test need to be devised? Decide how to use any observations that are scheduled.
2. DO - carry out the change or test decided upon, preferably on a small scale.
3. CHECK - observe the effects of the change of the test. In some cases, this step is called a study.
4. ACT - study the results. What did we learn? What can we predict from what we learned? What we learned from the change should lead to either (a) improvement of any, or all stages and (b) some activity to better satisfy the customer either internal, or external. The results may indicate that no change at all is needed, at least for now.

AFTER ACTION REVIEW:

The AAR can be formal or informal, depending on the audience and the reason or timeframe for conducting it. An informal AAR for this case study could be a "Happy Hour" conversation, where the formal AAR would be a scheduled event with a specific agenda and possibly specific information to present. The proposed agenda, with script, is shown below. The script is necessary in order to educate the participants about the benefit and intent. The script is only a guide to assist the facilitator in managing the process.

Agenda/ Script for the EDC/ SSM Meeting

December 18, 2000

Let me bounce an idea off you. I suggest using a method of communication I have learned from the Army Reserves. This style of discussion should lead us to focus on information that provides options for Partners for Progress to invest in alternative transportation, without 'sidebars', therefore maximizing the time scheduled for the meeting. The purpose is to ask leading questions in order to draw out your ideas. The outcome is a simple brainstorming session that identifies opportunities for influencing alternative transportation that may have not been previously considered. The questions are not intended for my information, but rather to solidify in your mind the overall mission. It is not intended to solve problems, but identify opportunity. The format of the After Action Review, with sample questions, follows:

- Introduction - The AAR is a professional discussion intended to identify lessons learned. It is not a critique, but an opportunity to identify strengths and weaknesses from which to build. Also, it is not the time to solve problems, but an opportunity to develop an action list for the near future.
- Review of Objectives and Intent - What was our objective? What intent are we trying to accomplish?
- Summary of Recent Events - Who can provide a summary, or outline of events that have occurred from the first meeting with Kevin Kast in August, to the meeting today?

- Discussion of Key Events - Let's review the "Plan of Action"... Are the appropriate participants identified? How can we communicate better? (email, conference call, delegation, committee) How do you feel about what has happened? Other questions as necessary....
- Closing Comments - What are our strengths? What are our weaknesses? What is our next step? What action items need immediate attention? Other questions are asked as necessary.... What are your questions or comments?

From this process we have identified opportunities, based on our intent and the potential influence of others within the community. With this information, we can complete the action items before our next meeting....

SUMMARY:

The interest of the concepts and theories presented in this paper resulted from the observation that some engineers, contractors and other professionals have difficulty with leadership and communication skills. This interest led to evaluating the problem of implementing Total Quality Management, therefore developing the theory of using the Troop Leading Procedures. In retrospect, the application of the TLPs to alternative transportation may have been too large a topic to fully report, given the timeframe of developing the thesis for graduation. A smaller case study may have been more appropriate in order to develop proof of the effectiveness. The only drawback to that idea, would have meant that the communication between the SSM, EDC, United Way, Partners for Progress, East-West Gateway, and County Executive may not have occurred. On a positive note, comments on the draft of this paper, from Tom Dehner, provided additional information about the broker organization Ride Finders. "The (Julie) Hansen (Public Relations) Group is (a) PR representative for Ride Finders - may be useful."

The benefit of applying these concepts to alternative transportation as an advocate has been the opportunity to influence and promote change within the County. The resulting increased communication between these organizations is "proof positive" that effective leadership and

communication works in the context and process of continuous improvement, no matter what tools are used. There is no doubt that a "synergy" has been created, allowing an opportunity for change with limited bureaucracy. As Sullivan wrote, "leadership always comes back to people," (241).

Appendix A

GLOSSARY OF TERMS

| | |
|--------|---|
| AAR | After Action Review |
| AGC | Associated General Contractors of America |
| ASCE | American Society of Civil Engineers |
| ASQ | American Society for Quality |
| CDL | Commercial Driver's License |
| CQE | Certified Quality Engineer |
| DBOM | Design - Build - Operate - Maintain |
| IDOT | Iowa Department of Transportation |
| ISO | International Standards Organization |
| JME | Journal of Management in Engineering |
| LCIE | Lindenwood College of Individual Education |
| LME | Journal of Leadership and Management in Engineering |
| MoDOT | Missouri Department of Transportation |
| MBO | Management by Objectives |
| MCS | Management Communication Style |
| PDCA | Plan, Do, Check, Act (Cycle) |
| PR | Public Relations |
| SBA | Small Business Administration |
| SCAT | St. Charles Area Transit |
| SPC | Statistical Process Control |
| SSM | Sisters of St. Mary Healthcare |
| SWOT | Strengths, Weakness, Opportunity, Threat Analysis |
| TEA-21 | 1998 Federal Transportation Equity Act for the 21 st Century |
| TLP | Troop Leading Procedures |
| TQM | Total Quality Management |

ELEMENT: PLATOON
 TASK: CONDUCT TROOP LEADING PROCEDURES (5-3-1018) (FM 7-7)

ITERATION 1 2 3 4 5 M (circle)

TRAINING STATUS GO NO GO (circle)

CONDITION: The platoon receives a mission. Some iterations should not be done in MOPP4.

TASK STANDARD: The platoon leader gives a warning order, conducts a reconnaissance, issues a platoon (Operations Order), and supervises the preparation for the assigned mission within the allotted time.

TASK STEPS AND STANDARDS GO NO GO

*1. The platoon leader receives the mission in a FRAGO/OPORD (Fragmentary or Operations Order) from an engineer company or maneuver task force. Determines the METT-T, needed supplies and equipment, and special tasks to assign.

*+2. The platoon leader issues the warning order to the platoon sergeant, squad leaders, and any attached section leaders.

- a. States the mission (nature of the operation).
- b. Identifies operation participants.
- c. States the time of the operation.
- d. Gives specified instructions.
- e. Gives the time and place for issuance of the complete order.

*3. The platoon leader makes a tentative plan while the platoon prepares.

- a. The platoon leader--
 - (1) Bases the plan on the METT-T.
 - (2) Plans available time using reverse planning.
 - (3) Uses no more than one-third of the available time, leaving the remainder for squad preparation.
- b. The other leaders begin precombat checks and reconfigure equipment based on the mission. As a minimum, they check rations, water, weapons, ammunition, individual uniforms and equipment, mission essential equipment, and individual soldiers' knowledge of the mission.
- c. The platoon continues assembly area activities and security.
 - (1) Maintains equipment and weapons.
 - (2) Conducts personal hygiene.
 - (3) Resupplies
 - (4) Rehearse battle drills.
 - (5) Test-fires weapons, if possible.
 - (6) Eats and rests.

4. The platoon begins movement.

NOTE: This task step may be omitted in a different sequence or be done concurrently with another task step.

- a. If required, the platoon leader initiates movement before completing the plan.
- b. The platoon sergeant or one of the squad leaders moves the platoon in the absence of the platoon leader.
- c. Squad and section leaders continue mission preparation.

- d. *5. The platoon leader conducts a reconnaissance.
 - a. As a minimum, conducts a map reconnaissance.
 - b. Conducts a ground reconnaissance (usually as part of a larger force).
 - (1) Takes subunit leaders (as many as practical).
 - (2) Identifies areas critical to the mission.
 - (3) Moves as far forward as time and the tactical situation permits.

*+6. The platoon leader completes the plan.

- a. Makes changes to the tentative plan based on the map/ ground reconnaissance.
- b. Makes changes to the tentative plan based on available equipment, personnel, and/or material.

*7. The platoon leader verbally issues the completed order to the platoon sergeant, squad leaders, and attached section leaders in a FRAGO (Fragmentary Order) or OPORD (Operations Order) format.

NOTE: The order may be given to the entire platoon at the same time.

*8. The leaders of the platoon supervise final preparations using any combination of the task steps listed in paragraphs 8a through 8d.

- a. Develop sand table exercises.
 - (1) Construct a sand table reflecting the mission terrain.
 - (2) Rehearse the mission on the sand table with the leaders.
- b. Conduct leader rehearsals.
 - (1) Walk through the mission with the leaders in the assembly area.
 - (2) Cover critical aspects of the mission.
 - (3) The platoon leader ensures that the subordinate leaders understand their missions.
- c. Conduct platoon rehearsals.
 - (1) Erect a mock-up of enemy obstacles and fortifications.
 - (2) Walk through the mission in the assembly area.
 - (3) Ensure each element understands their mission.
- d. Conduct a rehearsal with the supported maneuver force. The rehearsal should be a full unit rehearsal in the assembly area. It may be a sand table exercise or a leader rehearsal.
- e. Conduct inspections.
 - (1) Check/inventory equipment. Ensure items are serviceable and the platoon has everything specified in the company SOP (Standard Operating Procedure) and those items required for the specific mission.
 - (2) Ensure the unit has adequate resupply ammunition, food, water, repair parts, fuel, medical supplies, obstacle material, demolitions, and mines.
 - (3) Conduct a communications check.
 - (4) Ensure personnel, equipment, and carriers are camouflaged, and weapons are test fired.
 - (5) Question personnel to ensure they understand the platoon order and their specific responsibilities.
 - (6) Make a final inspection of personnel, vehicles, weapons, and equipment prior to starting the mission.

TASK PERFORMANCE SUMMARY BLOCK

| ITERATION | 1 | 2 | 3 | 4 | 5 | M | TOTAL |
|----------------------------------|-------------------|---------------------|---|---|---|---|-----------------------------|
| TOTAL TASK STEPS & STANDARD EVAL | | | | | | | |
| TOTAL TASK STEPS & STANDARD "GO" | | | | | | | |
| NOTE: | *leader task step | +critical task step | | | | | *+critical leader task step |

Appendix C

LEADERSHIP IN ACTION (Military Leadership 53)

| As a Leader, You Must: | Examples: | |
|---|---|--|
| BE | | |
| Be a person of strong and honorable character. | <ul style="list-style-type: none"> • Determination. • Compassion. • Self-discipline. • Role Modeling. | <ul style="list-style-type: none"> • Initiative. • Flexibility. • Consistency. |
| Be committed to the professional Army ethic. | <ul style="list-style-type: none"> • Loyalty to the nation, the Army, and the unit. • Selfless service. | <ul style="list-style-type: none"> • Integrity. • Duty. |
| Be an example of individual values. | <ul style="list-style-type: none"> • Courage. • Candor. | <ul style="list-style-type: none"> • Competence. • Commitment. |
| Be able to resolve complex ethical dilemmas. | <ul style="list-style-type: none"> • Interpret the situation. • Analyze all the factors and forces that apply. | <ul style="list-style-type: none"> • Choose a course of action that seems best for the nation. |
| KNOW | | |
| Know the four factors of leadership and how they affect each other. | <ul style="list-style-type: none"> • The Leader. • The Situation. | <ul style="list-style-type: none"> • The Led. • Communication. |
| Know standards. | <ul style="list-style-type: none"> • Sources of Army standards. | <ul style="list-style-type: none"> • How standards relate to warfighting. |
| Know yourself. | <ul style="list-style-type: none"> • Personality and performance. • Strengths and weaknesses. | <ul style="list-style-type: none"> • Knowledge, skills, and attitudes. |
| Know human nature. | <ul style="list-style-type: none"> • Potential for good and bad behavior. | <ul style="list-style-type: none"> • How depression and sadness contribute to fear and panic, and how fear affects performance. |
| Know your job. | <ul style="list-style-type: none"> • Plan and communicate effectively. • Supervise, teach, coach, and counsel. • Display technical and strategic competence. | <ul style="list-style-type: none"> • Develop subordinates. • Make good decisions that soldiers accept. • Use available systems. |
| Know your unit. | <ul style="list-style-type: none"> • Unit capabilities and unit limitations. | |
| DO | | |
| Provide purpose. | <ul style="list-style-type: none"> • Explain the “why” of missions. | <ul style="list-style-type: none"> • Communicate your intent. |
| Provide direction. | <ul style="list-style-type: none"> • Plan. • Maintain standards. • Set goals. • Make decisions and solve problems. | <ul style="list-style-type: none"> • Supervise, evaluate, teach, coach, and counsel. • Train soldiers and soldier teams. |
| Provide motivation. | <ul style="list-style-type: none"> • Take care of soldiers. • Serve as the ethical standard bearer. • Develop cohesive soldier teams. • Make soldiering meaningful. | <ul style="list-style-type: none"> • Reward performance that exceeds standards. • Correct performance not meeting standards. • Punish soldiers who intentionally fail to meet standards or follow orders. |

Appendix D

Rules (with a Small "r") for Guiding Change (Sullivan 236)

Rule One: Change is Hard Work

Leading change means doing two jobs at once - getting the organization through today and getting the organization into tomorrow. Most people will be slow to understand the need for change, preferring the future to look like today, thus displacing their lives and sense of reality as little as possible. Transformational leadership requires a personal and very hands-on approach, taking and directing action, building the confidence necessary for people to let go of today's paradigm and move into the future.

Rule Two: Leadership Begins with Values

Shared values express the essence of an organization. They bind expectations, provide alignment, and establish a foundation for transformation and growth. By emphasizing values, the leader signals what will not change, providing an anchor for people drifting in a sea of uncertainty and strategic context for decisions and actions that will grow the organization. Leadership begins with Values.

Rule Three: Intellectual Leads Physical

The most important phase of the exercise of strategic leadership is the front-end work -- the in-depth, serious thinking by a leader and his or her team -- that results in the creation of an intellectual framework for the future. Imagining the future first takes place in the mind of the leader and then must be communicated throughout the organization. This intellectual change guides the physical changes -- in process, structure, and output -- that manifest the transformation. Without the tough up-front work of intellectual change, physical change will be unfocused, random and unlikely to succeed.

Rule Four: Real Change Takes Real Change

Your critical processes provide the link between thinking about change and actually effecting change, because by changing the critical processes -- not simply making adjustments at the margin -- the leader creates a pattern, a structure, for doing things differently at the most basic level of the organization. Only by making change at this fundamental level is it possible to effect substantive and enduring transformation.

Rule Five: Leadership is a Team Sport

Effective leaders forge alliances and build teams. They break down walls, floors and ceilings, distributing leadership throughout the extended organization. Team building empowers people with a sense of responsibility so that the momentum for growth and transformation originates throughout the organization, not just from the top. Effective leadership is not about controlling from the top; it is about unleashing the power of people.

Rule Six: Expect to be Surprised

The paradox in creating the future is that you cannot predict the future. Success will come from being able to accommodate the unexpected, exploiting opportunity and working through setbacks. A leader must build flexibility and resilience into the organization, conditioning it *not to be surprised to be surprised* so that, when the unexpected occurs, response is prompt, action is deliberate, and the organization stays on course. The organization that is successful is the one that can best deal with surprise.

Rule Seven: Today Competes with Tomorrow

An organization has only so much energy, so many resources, so many bright people capable of leading. Most of the organizational energy must be focused on today's requirements -- meeting the needs of the market in real time. A certain amount of resistance to any change campaign is not disagreement so much as exhaustion. But the leader knows that some of the resources -- time, energy, the best people -- *must* be directed toward the future and that he or she must find a balance between the two.

Rule Eight: Better is Better

Winning organizations understand that "better" is not necessarily defined in terms of today's rubrics. Better is not about improved quality, reduced costs, faster cycle time, flatter structure, empowerment, or shared information. Better may include all those things and more, but those are the dimensions of gradual change. Better is about establishing and sustaining an edge in tomorrow's world. Better is becoming something different. Better is winning.

Rule Nine: Focus on the Future

A leader today does not have the luxury of waiting until the organization perceives a crisis. A leader must focus on the future from wherever the organization is on the sine curve and thereby nurture a positive, creative culture, one marked by optimism. By sponsoring specific activities and events designed to illustrate and test the new paradigm, a leader encourages similar behavior in others, causing them to look beyond today and participate in creating the new organization.

Rule Ten: Learn from Doing

Learning from doing and sharing the knowledge gained are the essence of organizational learning. By listening to the organization and fostering a dialogue about performance, the leader opens the door to learning, sharing lessons learned, and reducing risk. By stretching the organization to act differently, to do new things in a learning atmosphere, the leader fosters an entrepreneurial spirit of innovation and growth.

Rule Eleven: Grow People

The potential to build organizations that can thrive in tomorrow's environment lies in our people. The challenge is not to be the most creative boss or to have the most creative headquarters staff; it is to have the most creative organization, limited only by the collective imagination of all its constituents.

And Reflect

The most important tool a leader uses is not a list of rules but a mind sharpened by a habit of reflection. We use three questions: What is happening? What is not happening? How can I influence the situation? Taking time to reflect is one of the hardest habits to cultivate. 'When you are up to you neck in alligators, it is hard to remember that your task is to drain the swamp.' But even if you are at the bottom of your sine curve, the most important imperative is that you take time to reflect, to put events into perspective.

Appendix E

Condensation of the 14 Points for Management (Deming 23)

1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business and to provide jobs.
2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities and take on leadership for change.
3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.
4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.
5. Improve constantly and forever the system of production and service, to improve quality and productivity and thus constantly decrease costs.
6. Institute training on the job.
7. Institute leadership. The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.
8. Drive out fear, so that everyone may work effectively for the company.
9. Break down barriers between departments. People in research, design, sales and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.
10. Eliminate slogans, exhortations and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.
11. Eliminate:
 - a. work standards (quotas) on the factory floor. Substitute leadership.
 - b. management by objective; management by numbers, numerical goals. Substitute leadership.
12. Remove:
 - a. barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality.
 - b. barriers that rob people in management and in engineering of their right to pride in workmanship. This means, *inter alia*, abolishment of the annual or merit rating and of management objective.
13. Institute a vigorous program of education and self-improvement.
14. Put everybody in the company to work to accomplish the transformation. The transformation is everyone's job.

Appendix E (con't)
Diseases and Obstacles (Deming 97)

A. The (Seven) Deadly Diseases

1. Lack of constancy of purpose to plan product and service that will have a market and keep the company in business, and provide jobs.
2. Emphasis on short-term profits: short-term thinking (just the opposite from constancy of purpose to stay in business), fed by fear of unfriendly takeover, and by push from bankers and owners for dividend.
3. Evaluation of performance, merit rating, or annual review.
4. Mobility of management; job hopping.
5. Management by use only of visible figures, with little or no consideration of figures that are unknown or unknowable.
6. Excessive medical costs. 'Blue Cross is our second largest supplier.'
7. Excessive costs of liability, swelled by lawyers that work on contingency fees.

B. Obstacles

1. Hope for instant pudding (accomplished suddenly by affirmation of faith).
2. The supposition that solving problems, automation, gadgets, and new machinery will transform industry.
3. Search for examples (it is a hazard to copy).
4. "Our problems are different."
5. Obsolescence in schools.
6. Poor teaching of statistical methods in industry.
7. Use of Military Standard 105D and other tables for acceptance (increased cost).
8. "Our quality control department takes care of all our problems of quality."
9. "Our troubles lie entirely in the work force."
10. False Starts
11. "We installed quality control." (No. You install a new desk...)
12. The unmanned computer.
13. The supposition that it is only necessary to meet specifications.
14. The fallacy of zero defects.
15. Inadequate testing of prototypes.
16. "Anyone that comes to try to help us must understand all about our business."

Appendix F

(A Construction Companies) Steps in Implementing TQM: (AGC 36)

1. CEO Commitment
 2. Educate Upper-Level Management
 3. Creation of a Steering Committee
 4. Strategic Quality Planning
 5. Vision Statement, Mission Statement, Guiding Principles
 6. Flow Diagram of Company Process
 7. Customer Surveys
 8. Employee Surveys
 9. Continue Basic Quality Education
 10. Establish Quality Improvement Teams
 11. Implement Process Improvements
 12. Begin Supplier Improvement
- ⇒ 1. ⇒ 2. ⇒ 3. ⇒ 4. ⇒ etc. ⇒ Continuous Improvement

Obstacles for Implementing Total Quality Management (AGC)

1. The Comfort Factor
2. Lack of Upper Management Commitment and Support
3. Resistance to Change
4. Skepticism and Mistrust
5. Authoritarian Behavior
6. The Press of Current Business
7. We're Already Doing TQM
8. Up-Front Costs
9. Failing to Do All of TQM
10. Progress May Stall

Appendix G

Expanded Situational Leadership Model (Hersey 208)

| LEADER BEHAVIOR | | | |
|---|--------|---|---|
| RELATIONSHIP BEHAVIOR (Supportive Behavior) | (HIGH) | S3 Share ideas and facilitate in decision making Hi Rel Lo Task | PARTICIPATING Hi Task Hi Rel |
| | | S4 Turn over responsibility for decisions and implementation Lo Rel Lo Task | DELEGATING Hi Task Lo Rel |
| | (LOW) | TASK BEHAVIOR (Guidance) | |
| | | | (HIGH) |

| FOLLOWER READINESS | | | |
|-------------------------------|--------------------------------|---------------------------------|----------------------------------|
| HIGH | MODERATE | | LOW |
| R4 | R3 | R2 | R1 |
| Able and willing or confident | Able but Unwilling or Insecure | Unable but Willing or Confident | Unable and Unwilling or Insecure |
| FOLLOWER DIRECTED | | LEADER DIRECTED | |

S - Situation, R - Readiness

TASK BEHAVIOR -

The extent to which the leader engages in defining roles i.e. telling what, how, when, where, and if more than one person, who is to do what in:

- Goal-Setting
- Organizing
- Establishing Time Lines
- Directing
- Controlling

RELATIONSHIP BEHAVIOR -

The extent to which a leader engages in two-way (multi-way) communication, listening, facilitating behaviors, socioeconomic support:

- Giving Support
- Communicating
- Facilitating Interactions
- Active Listening
- Providing Feedback

DECISION STYLES -

1. Leader-Made Decision
2. Leader-Made Decision with Dialogue and/or Explanation
3. Leader & Follower-Made Decision or Follower-Made Decision with Encouragement from Leader
4. Follower-Made Decision

ABILITY: has the necessary knowledge, experience, and skill

WILLINGNESS: has the necessary confidence, commitment, motivation

When a Leader Behavior is used appropriately with its corresponding level of readiness, it is termed a High Probability Match. The following are descriptors that can be useful when using Situational Leadership for specific applications:

| S1 | S2 | S3 | S4 |
|---|---|---|---|
| Telling Guiding Directing Establishing | Selling Explaining Clarifying Persuading | Participating Encouraging Collaborating Committing | Delegating Observing Monitoring Fulfilling |

Appendix H

Ten basic principles of public relations (Newsom 5):

1. Public relations deals with reality, not false fronts. Conscientiously planned programs that put the public interest in the forefront are the basis of sound public relations policy. (Translation: PR deals with facts, not fiction.)
2. Public relations is a service-oriented profession in which public interest, not personal reward should be the primary considerations. (PR is a public not personal service.)
3. Since the public relations practitioner must go to the public to seek support for programs and policies, public interest is the central criterion by which he or she should select these programs and policies. (PR practitioners should have the guts to say no to a client or to refuse a deceptive program.)
4. Because the public relations practitioner reaches many publics through mass media, which are the public channels of communication, the integrity of these channels must be preserved. (PR practitioners should never lie to the news, media, either outright or by implication.)
5. Because PR practitioners are in the middle between an organization and its publics, they must be effective communicators – conveying information back and forth until understanding is reached. (The PR practitioner probably was the original ombudsman/woman.)
6. To expedite two-way communication and to be responsible communicators, public relations practitioners must use scientific public opinion research extensively. (PR cannot afford to be a guessing game.)
7. To understand what their publics are saying and to reach them effectively, public relations practitioners must employ the social sciences – psychology, sociology, social psychology, public opinion, communications study and semantics. (Intuition is not enough.)
8. Because a lot of people do PR research, the PR person must adapt the work of other, related disciplines, including learning theory and other psychology theories, sociology, political science, economics and history. (The PR field requires multidisciplinary applications.)
9. Public relations practitioners are obligated to explain problems to the public before these problems become crisis. (PR practitioners should be alert and advise, so people won't be taken by surprise.)
10. A public relations practitioners should be measured by only one standard: ethical performance. (A PR practitioner is only as good as the reputation he or she deserves.)

Appendix I

The Twelve Steps of AA (Schaefer 227)

1. We admitted we were powerless over alcohol, that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God *as we understood Him*.
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked Him to remove our shortcomings.
8. Made a list of all persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people whenever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God *as we understood Him*, praying only for the knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry these messages to alcoholics, and to practice these principles in all our affairs.

Works Cited

American Society for Quality. Welcome to the American Society for Quality. Internet. 30 September 2000. Available: www.asq.org.

Arditi, David; Gunaydin, H. Murat. "Perceptions of Process Quality in Building Projects," Journal of Management in Engineering (Mar/Apr 1999): 43-53.

Barry, John M. Rising Tide, The Great Mississippi Flood of 1927 and How It Changed America. Touchstone, New York, NY, 1997.

Beatty, Jack. The World According to Peter Drucker. The Free Press, a division of Simon and Schuster Inc., New York, NY, 1999.

Chase, Gerald W., PhD. Implementing TQM in a Construction Company. AGC (Associated General Contractors of America), Washington DC, 1993.

---. "Improving Construction Methods: A Story about Quality," Journal of Management in Engineering (May/June 1998): 30-33.

---. Email, Iowa State University, Ames, IA, 18 Nov 2000.

City of Ames, Iowa. CyRide. Internet. 6 March 1999. Available: www.city.ames.ia.us/cyrideweb.

Covey, Steven. Personal Leadership Application Workbook. Covey Leadership Center, Inc., Provo, UT, 1986.

---. The 4 Roles of Leadership. Internet. 30 September 2000. Available: www.franklincovey.com/public.

DePree, Max. Leadership is an Art. Dell Publishing, New York, NY, 1989

Dehner, Tom. Instructor, Public Relations Cluster. Lindenwood University, St. Charles, MO, Fall Quarter, 1998.

---. Committee Member, Master's Candidacy. Written Comments. Lindenwood University, St. Charles, MO, December, 2000.

Deming, W. Edwards. Out of the Crisis. Massachusetts Institute of Technology, Cambridge, MA, 1986.

Drucker, Peter F. "Change Leaders," Inc.® The Magazine for Growing Companies (June 1999): 64-72.

East-West Gateway Coordinating Council. Alternative Transportation Study for St. Charles County. Internet. 20 Sept 2000. Available: ewgateway.org.

Federle, Mark O.; Jahren, Charles T. "Implementation of Quality Improvement for Transportation Construction Administration," Journal of Management in Engineering (Nov/Dec 1999): 56-65.

Freedman, David H. "Corps Values," Inc.® The Magazine for Growing Companies (April 1998): 54-66.

General Dennis J. Reimer Training and Doctrine Library. U. S. Department of the Army Publications. Internet. 30 September 2000. Available: www.adtdl.army.mil.

- Hensey, Mel. "The Why and How of Facilitative Leadership," Journal of Management in Engineering (May/June 1999): 43-51.
- Hess, Beth. Breaking the Learning Curve. Bus Ride (February 1999): 30-33.
- Hersey, Paul; Blanchard, Kenneth H.; Johnson, Dewey E. Management of Organizational Behavior. Prentice-Hall, Upper Saddle River, NJ, 1996.
- Jansen, David. "Speak Out: The Engineer as Communicator," Journal of Management in Engineering (March/April 1998): 19-22.
- Jurkiewicz, William J. Information Package. Care Cab Transportation. St. Louis, MO, July 2000.
- Johnson, Elizabeth A., P.E. A Public Transit Plan for the City of St. Charles. Product Management Cluster, Lindenwood University, St. Charles, MO, April 1999.
- . The Implementation of Total Quality Management based on the guidelines of the U.S. Army's Troop Leading Procedures. Public Relations Cluster, St. Charles, MO, December 1998.
- Johnson, Holly M.; Singh, Amarjit. "The Personality of Civil Engineers," Journal of Management in Engineering (July/Aug 1998): 45-56.
- Kaman, Vicki S.; Mitchell, Thomas. "Going to the Future to Develop Transportation Leadership Skills," Journal of Management in Engineering (Jan/Feb 1999): 82-87.
- Kuprenas, John A.; Chinowsky, Paul S.; Harano, Winefred. "Strategic Planning in Public Sector Engineering Organization," Journal of Management in Engineering (Sept/Oct 2000): 34-43.
- Lane, Tony. Information Package. Ride Finders. Granite City, IL, July 2000.
- Lewis, Rick. Personal Interview. Public Works Department, St. Charles, MO. July 2000.
- Marks, George, P.E. "Opportunities and Innovations in Transportation," The Military Engineer (June/July 1999): 29-30.
- McIntyre, Charles; Kirschenman, Merlin. "Survey of TQM in Construction Industry in Upper Midwest." Journal of Management in Engineering (Sept/Oct 2000): 67-70.
- Meeks, Kenneth W., D.Sc., P.E. "Conflict Resolution in Construction," The Military Engineer (March/April 2000): 63-64.
- Newsom, Doug; Turk, Judy Vanslyke; Kruckeberg, Dean. This is PR, The Realities of Public Relations. Wadsworth Publishing Company, Belmont, CA, 1996.
- OATS[®], Inc. Information Letter. St. Louis, MO. July 2000.
- Pzydek, Thomas. Quality Engineering Handbook. Quality Publishing, LLC, Tuscon, AZ, 1999.
- Richmond, Virginia P.; McCroskey, James C. Organizational Communication for Survival. Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1992.
- Russell, Jeffrey S., P.E., PhD. Email. University of Wisconsin, Madison, WI, 24 Nov 2000. St. Louis 2004. TEA21. Internet. 30 Sept 2000. Available: stlouis2004.org

Schaeff, Anne Wilson; Fassel, Diane. The Addictive Organization. HarperCollins Publishers, New York, NY, 1988.

Silverio, Joseph R. Instructor, Product Management Cluster. Lindenwood University. St. Charles, MO. Winter Quarter 1999.

Singh, Amarjit; Shoura, Max M. "Assessment of Organizational Change for Public Construction Organizations," Journal of Management in Engineering (July/Aug 1999): 59-70.

Smith, David P., P.E. "Transit by DBOM: A First," The Military Engineer (June/July 1999): 25-26.

Sullivan, Gordon R; Harper, Michael V. Hope is Not a Method. Times Books., New York, NY, 1996.

U. S. Department of the Army. Military Leadership, FM 22-100. Washington D. C., 31 Jan 1990.

U. S. Department of the Army. A Leader's Guide to After Action Reviews, TC 25-20. Washington D. C., 30 September 1993.

U. S. Department of the Army. Conduct Troop-Leading Procedures, ARTEP 5-415-13-MTP. Washington D.C.

Weingardt, Richard G., P.E. "Leaving a Legacy." Journal of Management in Engineering (Mar/Apr 2000): 42-47.

Wortman, Bill. COE Primer. Quality Council of Indiana, Indianapolis, IN, 1999.