

RESEARCH METHODOLOGY THROUGH DISERTATION ANALYSIS

By

Paul L. Gerhardt

Survey of Applied Research Methods

August, 2003

## Abstract

This paper analyzes the methodologies and critiques the methods used in three dissertations, while also analyzing their supporting arguments and conclusions. The papers chosen are quantitative, qualitative and mixed methods research. The goal is to gain a better understanding of how each of these types of research work best in presenting a dissertation. Qualitative research papers generally are larger in content and are descriptive of opinions and feelings and employ open-ended questions, image data and emerging approaches. Quantitative research papers are generally the smallest in pages and contain numeric data, have predetermined approaches and closed-ended questions. Mixed methods approach to research employ attributes of both quantitative and qualitative style research. No one method is best.

## Table of Contents

Introduction.....	1
Executive Leadership.....	2
Transformational VS Transactional Leadership.....	3
Team Leadership.....	4
Dissertation Review .....	4
Quantitative Research Review .....	4
Method .....	6
Research Design.....	6
Measures .....	7
Analysis.....	9
Limitations .....	10
Comments .....	11
Lessons Learned.....	11
Qualitative Review.....	12
Method .....	12
Analysis.....	14
Limitations .....	15
Comments .....	16
Lessons Learned.....	16
Mixed Methods Review .....	17
Analysis.....	17

Limitations .....	19
Comments .....	20
Lessons Learned.....	20
Conclusion .....	21
References.....	22

## Introduction

This paper analyzes the methods used in three dissertations on leadership. Style, content, and argument are analyzed and evaluated based on literature that discusses elements of research. Each dissertation analyzed and reviewed in this paper represents a differing style of research. The first is a quantitative approach. The second is a qualitative approach. The third is a mixed method approach. A final summary of what was learned is at the end of each section. This introduction will summarize the content of each of the dissertations briefly. The main body of the paper will contain an in-depth analysis for each of the papers.

Supporting and arguing research came from an online database of articles discussing elements of research as they pertain to qualitative, quantitative and mixed method research papers. The dissertations were purchased through an online publisher--UMI, and can be purchased for individual review to the general public.

These papers were chosen based upon their methodology and their relationships to leadership and current problems in this ever-competitive technological age. The topics of these papers include transformational and transactional leadership for service and manufacturing organizations, team leadership and corporate executive leadership. It is believed that these topics are deserving of further research due to an ever-increasing competitiveness of today's business world, increased competition brought forth by the Internet, and other communication technologies.

Various leadership theories show a relationship between successes of organizations and the abilities and characteristics of their leaders (Northouse, 2001). Other research suggests that technology is greatly impacting the way organizations do business and that only the businesses that maintain the best people and leadership will prosper in today's technological climate (Godin,

2002). With this in mind, it is therefore necessary to research challenges of leadership which shape today's business organizations

### *Executive Leadership*

Starting at the top of the organization, it is necessary to gain a stronger understanding of the impacts corporate executive leaders programs. Using the research of Marco L. Cavazzoni (2002), one can better understand how corporate executive leadership programs impact executive behaviors. The purpose statement of the dissertations of Marco Cavazzoni (2002) is to determine:

- 1) If the self-perceived leadership behavior of the executives who attend the Executive Leadership Program (ELP), as measured by a set of leadership characteristic scores, improves beyond those executives who do not attend the ELP(Cavazzoni, 2002, p. 21).
- 2) If there is a sustained improvement in perceived executive leadership behavior, as measured by the ELP attendee and the attendee's supervisor via a set of leadership characteristic scores, 6 months and 1 year after completion of the ELP program (Cavazzoni, 2002, p. 21).

Questions researched and answered include:

- 1) Is there a change in self-perceived leadership behavior scores, as measured by the LIB leadership characteristics and adjusted for the pretest score, between those executives who did attend and did not attend the ELP 6 months after completing the ELP (Cavazzoni, 2002, p. 22)?
- 2) Is there a change in leadership behavior score measured by the LIB leadership characteristics, as perceived by executives who attended the ELP and their supervisors, across the period of time in which this study was conducted (Cavazzoni, 2002, p. 22)?

The results of the mixed-methods research conducted by Cavazzoni (2002) may be of significant use to organizations that are looking for useful ways to increase the strength of their executives in this competitive-technological age. According to this study, executive leadership programs were predictable.

*Transformational VS Transactional Leadership*

The second proposed dissertation analyzes two forms of leadership that may or may not be useful in dealing with the challenges of today's competitive-technological climate. The research conducted by Cameron Rich (2002) of Alliant International University investigates Transformational and Transactional Leadership as a Function of Management Level in Service and Manufacturing Organizations (2002). Rich (2002) proposes that:

The present investigation is designed to test this widely held supposition that transformational leadership is a direct increasing function of management level. [There are] differences between middle and upper managers on transformational leadership. Additionally, even though the present investigation predicts that the middle and high transformational differences will be the same in the service and manufacturing industries, this study will nevertheless simultaneously examine if industry type makes a difference at these higher levels.

Rich's dissertation answers the following questions:

Question 1: Is the use of transformational leadership a function of management level?

Question 2: Does type of industry moderate the relationship between level in the organization and leadership type?

Question 3: Is the use of transactional leadership a function of management level?

Question 4: Does the type of industry moderate the relationship between level in the organization and leadership type (Rich, 2002, pp. 4-5).

With this said, research of this nature could prove useful in helping organizations better understand what type of leaders may be best used in varying areas of their companies. The third dissertation will take a look at a more internal look at leadership from a team perspective.

### *Team Leadership*

The third dissertation titled: *Teams Leading Teams: Examining the Role of Leadership in Multi-Team Systems* was researched at Florida International University and written by Leslie A. DeChurch (2002). DeChurch's (2002) dissertation and the other two dissertations mentioned in this paper may be connected by a relationship derived through a greater understanding of leadership characteristics and styles distinguished from the top (executive) of the organizations, to the teams throughout the body and frontline of the organizations. DeChurch's research may help organizations build a stronger framework of teams through a greater understanding of teams leading teams. DeChurch's (2002) research explores the role of leadership teams in integrating multiple interdependent teams. A better understanding of the composition of teams and elements of what make teams successful can be derived through DeChurch's dissertation.

### Dissertation Review

The first dissertation reviewed and analyzed in this paper is of a quantitative method. Following this review two other papers will also be analyzed using the same basic criteria of analysis. The review will be based on an outline of: discussing the purpose of this study, discussion of the method used, an analysis, summary of limitations, comments and finalized by a summary of lessons learned.

### Quantitative Research Review

The first dissertation reviewed in this paper was written by Cameron Rich of Alliant International University in San Diego California and published in December of 2002. Rich's paper, titled *Transformational and Transactional Leadership as a Function of Management*

*Level in Service and Manufacturing Organizations* was approved by Alliant International University's school of Industrial-Organizational Psychology.

According to Rich (2002), the purpose of this study is, “designed to examine transformational and transactional leadership differences as a function of management level in service and manufacturing organizations (p.1).” In accordance with this philosophy of research, Rich (2002) contends that:

This study was intended to fill the void in the leadership literature by examining the differences among management levels and industries in regards to leadership type... Determination of whether leadership differences corresponding to management levels are a function of industry is expected to provide evidence for whether future research must consider industry type when designing studies of management and leadership (Rich, 2002, p.1).

Horna (1994) believes that quantitative research designs are best used to describe and explain social facts that can be investigated through the use of methodologies of deductive logic to explain natural sciences. Similarly, Creswell (2003), believes that quantitative methods are used primarily to test or verify theories or explanations, identify variables to study, relates variables in questions or hypotheses, uses standards of validity and reliability and employs statistical procedures. Also, “A quantitative approach is one in which the investigator primarily uses postpositivist claims for developing knowledge...and collects data on predetermined instruments that yield statistical data” (Creswell, 2003, p.18). Postpositivism refers to thinking after positivism and questions whether facts and information are absolutely true (Phillips & Burbules, 2000).

Likewise, Easterby-Smith (1991) recognizes that positivism uses quantitative and experimental methods to test hypothetical-deductive reasoning to understand and explain a phenomenon. Rich's (2002) dissertation explains relationships of transactional and

transformational leadership in service and manufacturing organizations using a quantitative analysis method. McGrath (1982) points out that no matter what method is chosen, quantitative or qualitative, there will be no ideal solutions, only compromises.

Rich's (2002) dissertation appropriately uses a quantitative approach in methodology. He clearly followed a systematic plan that included: collecting data, raw data analysis and assessment, data entry, data processing and interpretation (Dilanthi, Baldry, Sarshar, & Newton, 2002), as well as an in-depth study of the literature regarding leadership.

### *Method*

Rich (2002) used an a priori statistical power analysis in his dissertation research to determine whether a sample of 207 participants of lower, middle and high level managers from manufacturing and service industries was going to be appropriate. Rich (2002) found that the sample size was sufficient to obtain statistical power of .80, while assuming an alpha of 0.05 and a medium effect size. With a lower number of high level managers and a majority of lower level managers, an unequal sample was assessed. Employees from each of the organizations, who were primarily managers, signed consent forms that assured participants of confidentiality and advised them to contact the researcher at any time during or after the study to clarify any questions or concerns.

### *Research Design*

Rich (2002) used two independent variables in this study: management level and industry type. Because these two factors are static in nature, random assignment of participants was not used or considered feasible. Management was sorted into three levels: low level, middle level

and upper level executives. Lower level managers were distinguished by having only one organizational level below them which does not include managers. Lower level managers were supervisors having at least one subordinate employee. Middle managers were distinguished as having one or more organizational levels below them that include managers and one or more organizational levels above them. Upper level executives were distinguished and defined by having no levels of management above them and multiple organizational levels below them (Bryman, 1992; Denison, 1990).

Rich (2002) used information from the organization to characterize the other independent variables dealing with manufacturing or service industries. Rich (2002) did as Nau (1995) would describe as used distinguishing characteristics, elemental properties to find a measure of a behavior. In this case, Rich (2002) used independent variables used in the study which were based on transformational leadership preference and transactional leadership preference. Then, measured them through two tools: Leadership Behavior Questionnaire (LBQ) and Multifactor Leadership Questionnaire (MLQ).

### *Measures*

Rich (2002) used the LBQ and MLQ tests because "...of their report nature, concise directions to the participants, current use in leadership research, availability, and reliability relative to other instruments" (Rich, 2002, p.30). Other tools were considered and described in this dissertation, including: Campbell Leadership Index (CLI), Denison Leadership Development Survey and the Leadership Effectiveness and Adaptability Description (Lead).

All participants of the study completed a demographic questionnaire. The questions asked included basic information about age, gender ethnic background, questions on career demographic, management level and tenure.

The Leadership Behavior Questionnaire was used to assess and quantify a level of transformational leadership. The tool utilizes 50 statements in which the participant rates himself/herself. All items were put on a 5-point scale ranging from “not at all true” to completely true. Not at all true would have a rating of one, while the completely true would have a rating of five points. Scores from 50 to 145 represent lower transformation and visionary skills; scores from 226 to 250 represented high transformational and visionary skills (Sashkin, 1995).

The LBQ has 10 subscales, each composed of five statements representing a score from 5 to 25. Scores of 5 to 15 are low, scores from 23 to 25 are considered very high. Ten sub scales of the LBQ are: clear leadership, communicative leadership, consistent leadership, crossing leadership, creative leadership, confident leadership, visionary leadership, organizational leadership and cultural leadership. According to Sashkin (1995), the LBQ correlates with such things as organizational performance and productivity, as well as organizational beliefs.

Transactional leadership was measured in Rich’s (2002) study through usage of the Multifactor Leadership Questionnaire (MLQ). This tool is comprised by 45 descriptive statements that assess leadership behaviors. All items also use a five point scale that is very similar to the LBQ. “Not at all” is equal to zero points, while frequently, if not always is equal to four points.

The MLQ has 5 subscales reflecting transformational leadership and 3 scales reflecting transactional leadership. The scales measured contingent reward, active management-by-

exception, passive management-by exception, transactional leadership and non-transactional leadership (Bass & Avolio, 2000). According to Rich (2002), “Reliabilities for the total items and for each leadership factor scale ranged from .74 to .94 (p.33).” Using these quantifiable measures this research paper is clearly a high-quality quantitative method study (Dialsingh, 2003).

### *Analysis*

This paper was very well written, according to the qualifications that are presented by Creswell (2003). Although this paper was written in a mere 93 pages, the information was well-organized and researched. This paper did a great job of using language in order to compare variables and constructs. It also identified proposed variables for the study and clearly identified a sequence about how they were observed and measured (Creswell, 2003).

As far as research questions are concerned, Rich (2003) did an excellent job of following Creswell’s (2003) recommendation of comparing groups on an independent variable to see its impact on a dependent variable.

Rich’s (2003) hypothesis' are:

H1: The use of transformational leadership will not be a function of management level, specifically: H1a: Higher level executives will exhibit the same level of transformational leadership as will middle manager. H1b: Middle managers will exhibit the same level of transformational leadership as will lower level managers. H2: Differences in transformational leadership between higher level executives, middle level managers, and lower level managers will be the same for both service and manufacturing industries. Because no management level by industry interaction is expected, this null hypothesis is expected to be retained. H3: The use of transactional leadership will not be a function of management level, specifically: H3a: Higher level executives will exhibit the same level of transactional leadership as will middle level managers. H3b: Middle level managers will exhibit the same level transactional leadership than as lower level managers (pp. 24-25).

Rich (2003) did an excellent job using proper quantitative methods and associated theories to research and write his dissertation. Rich (2003) followed Creswell's (2003) model for writing a quantitative theoretical perspective. He looked into the discipline-based literature for theory. He looked into prior studies that addressed a related topic and described why the independent variables influenced the dependent variables (Creswell, 2003, p.127).

### *Limitations*

Although Rich's (2003) dissertation generally appears to be exceptionally well-written, it does appear to have a few minor limitations. There is not a section which defines terms and or significance. However, chapter five does include a summary of interpretation and implications of the findings. This section could have been enhanced with definitions, although more coverage of theories and other-similar studies is mentioned and discussed in chapter five.

Rich (2003) believes that some of the limitations to his study include the possibilities that responses may have been elicited because many of the participants may have been too busy to take the time to give accurate answers. Another limitation of the study is that Rich (2003) believes that the questionnaires used, LBQ and MLQ, did not give measures that assess the constructs of the transformational and transactional leaderships as distinctly as proposed. Also, Rich (2003) recognizes that the surveys were administered in English and that, "If Spanish versions of the tests were available, more companies would have participated in the study" (Rich, 2003, p.73).

*Comments*

The dissertation written by Cameron Rich (2003) has an excellent survey design. It identified the purpose of the survey (Babbie, 1990). Overall, it followed the design as discussed by Creswell (2003): It indicated why the surveys were the preferred types of collection procedures for the study. It specified the form of data collection. It identified the population in the study. It identified the selection process for individuals and procedures for selecting the sample. It named the survey instruments used to collect data and establish validity (Creswell, 2003, pp. 154-158).

*Lessons Learned*

This study of a quantitative research paper clearly shows how a study can be conducted, researched, discussed, argued, validated, and be supported. Quantitative research papers discuss the purpose of the study; identify the sample population and instruments used. They discuss the relationship between variables, research questions, steps taken in the analysis of the data and outcome (Creswell, 2003). When data is quantifiable, the arguments appear to indicate stronger validity and verification that a hypothesis can be argued either true or false. Also, when data is quantifiable, the length of the research paper can be considerably shorter in size. This study by Rich (2003) statistically shows relationships between leadership style, industry and level of the organization a leader may be in.

Rich (2003) made this quantitative dissertation easy to read and understand. By thoroughly discussing the design of the study and commenting on potential threats to validity, it allows readers to come to the same conclusion as the researcher with ease and with no or few questions of substantiation (Creswell, 2003).

### Qualitative Review

The second dissertation reviewed in this study is titled: *Evaluating the Impact of Corporate Executive Leadership Programs*, by Marco Cavazzoni of Pepperdine University (2002). The purpose of Cavazzoni's (2002) study is to assess whether leadership training programs bring a return on the investment. This paper is of a qualitative nature because it focuses on people's experiences and meanings in a normal social setting, while also focusing on processes and structures (Skinner, Tagg, & Holloway, 2000). Similarly, Bryman (1993) believes qualitative research studies the social world and analyzes and describes human behavior from the point of view of those being studied. This paper will discuss qualitative research methods in greater length further on.

### *Method*

Basically, Cavazzoni (2002) administered a Leadership Behavior Instrument (LBI) to a group of executives and supervisors prior to attending their company's Executive Leadership Program (ELP). The test was then administered again after six months of training and then again twelve months after the ELP participation.

Cavazzoni (2002) also used a two-way Repeated Measures Analysis of Variance to analyze the executives' leadership behaviors—as perceived by their supervisors and by the executives themselves. These measures were derived through LBI scores throughout the study. An analysis of Covariance was used to analyze the difference in perceived leadership behavior between the executives that had attended the ELP and those that did not (Cavazzoni, 2002).

The researcher (Cavazzoni, 2002), analyzed and described his findings of leadership literature that pertain to corporate leadership. One of the research materials covered includes studies of corporations described in the book: *Built to Last* (Collins & Porras, 1994), which showed that visionary companies share a cult-like commitment to a core ideology or identity and have employees who are fully indoctrinated and committed to the company's core ideology.

Cavazzoni (2002) also included corporate research that included studies of Motorola (Rucker, 1999; Fulmer & Gibbs, 1998) and GE (Crotty & Soule, 1997; Philippidis, 1997; Wilson 1996), using literature that described executive leadership training successes and development. Similarly, leadership models, terms and literature were discussed in the first 30-pages of this study.

The paper was organized into five chapters. The first chapter introduced the problem and topic, discussing the purpose for the study. Also, it presented the research limitations, questions and key definitions. The second chapter summarizes findings in a literature review. The primary areas discussed covered related materials dealing with leadership, development, adult learning, corporate leadership development, evaluation, and 360-degree instruments (Cavazzoni, 2002).

The third chapter covers the research design and methodology. Included in this section is an introduction to the research questions, research design, population, sample and analysis, as well as variables for each research question. This third chapter describes the instruments used and validity and reliability, as well as data collecting strategies and data analysis methods used (Cavazzoni, 2002).

Chapter four discusses the findings of the study. Here, the relationships between the variables for each research question are discussed (Cavazzoni, 2002). This qualitative study

explored through structured interviews, surveys and observations executives and managers before, during and after leadership training (Skinner, Tagg, &Holloway, 2000). Its findings were expressed with a strategy describing the experiences showing evidence of a general outcome. Chapter five summarizes the study and conclusions from the research findings. Also, recommendations for future applications of the study's corporate executive evaluation methodology are presented (Cavazzoni, 2002).

### *Analysis*

Cavazzoni's (2002) research paper does an excellent job at doing what a qualitative paper should do. It offers richness and depth to achieve an understanding of leadership (Skinner, Tagg, &Holloway, 2000). It gives a reflective understanding of complexities of corporate leadership programs, while keeping it organized with a voice of personal authority, as a good qualitative research project should (Skinner, Tagg, &Holloway, 2000).

Similarly, Cavazzoni (2002) appears to use qualitative techniques that focus on measuring things that can not be counted in descriptions of "predetermined categories that can be treated as internal or ordinal data and subjected to statistical analysis (Patton, 1997, p. 273)." Chapter four discusses the findings of the study discusses it in nearly thirty pages. Cavazzoni (2002) indicates that the executives do indeed benefit from leadership training.

As good qualitative research should, Cavazzoni (2002) explores the organization's goals and processes (Marshall & Rossman, 1995) to describe leadership successes as derived through the corporate training. Likewise, Cavazzoni (2002) illuminates, interprets and validates his findings in a way that recognizes and accounts for his own perceptions (Skinner, Tagg, & Holloway, 2000).

*Limitations*

Cavazzoni's (2002) paper is a well-written piece of qualitative research. It took place in the natural setting of the managers' and executives' offices and workplaces. This allowed the researcher to develop a level of detail and to observe the actual experiences of the participants, while the final conclusions emerged during the study (Creswell, 2003). Similarly, the research was fundamentally interpreted and reflects the biases of the researcher and the opinions of the participants (Creswell, 2003). These biases could be interpreted differently by others who have been exposed to other research that come pre-disposed to having biases that may influence how he or she may interpret the same data.

While Cavazzoni (2002) did primarily base his conclusions on the opinions of the participants, further research on leadership literature would suggest that it would be difficult to argue that the findings were conclusive. Likewise, it would take more research of leadership literature that would suggest the opposite of the leadership literature used to prove the conclusions as non-substantiate. There has yet to prove, however, that any such leadership literature exists at all.

Creswell (2003) notes several limitations of qualitative research including: Researcher may be seen as intrusive. Private information may be observed that the researcher cannot report. Researcher may not have good attending and observation skills. Certain participants may present special problems in gaining rapport. Interviews provide indirect information filtered through the views of interviewees. Interviews provide information in a designated "place" rather than the natural field setting. Researcher's presence may bias responses. People are not equally articulate and perceptive (Creswell, 2003, pp. 186-187).

*Comments*

Although there may be greater room for arguing whether a qualitative study can truly prove accurate, Cavazzoni (2002) appeared to have included enough information to not only give evidence that his findings were conclusive, but it also proved him scholarly enough to become a peer in the eyes of his PhD committee. This qualitative research dissertation was twice the length of the quantitative dissertation discussed earlier in this paper. The length appears to be justified in order to show proper analysis for the conclusions drawn.

*Lessons Learned*

Studying the make-up of a qualitative research paper takes a great deal more time than studying the contents of a quantitative dissertation. The findings are based on observations and opinions in a qualitative dissertation. Interpretations have biases based on previous experiences and information that the researcher has found and been exposed to that, in-turn has led him or her to an opinion of how something is. It appears that qualitative research can be interpreted in ways other than as the researcher may have intended. It is the supporting literature reviewed in the dissertation that assists the reader in coming to the same conclusions as the researcher. The fact that the researcher took a very focused and limited subject and used a concentrated combination of supporting literature and solid questioning assisted in making this qualitative study one in which it would be difficult to disagree against the findings.

This particular qualitative dissertation was well-written because it addressed the role of the researcher, the steps taken, and the issue of obtaining a good sample group of participants (Creswell, 2003). The interpretation of the data was well-organized, systematic and asked, and it

also answered good questions — using a solid strategy to validate the accuracy of the findings (Creswell, 2003, p. 206).

### Mixed Methods Paper Review

The third and final dissertation reviewed in this paper is of mixed methods research methodology and written by Leslie A. DeChurch (2002) of Florida International University. DeChurch's dissertation is titled: *Teams Leading Teams: Examining the Role of Leadership in Multi-team Systems* and has a total of 211 pages. The paper is broken into six distinct primary chapters. Chapter one is an introduction to the research. Chapter two is a literature review that discusses multi-team systems theory, leadership effectiveness, team effectiveness and multi-team leadership. Chapter three describes a model of multi-team leader effectiveness and discusses leader team strategy development, leader team coordination facilitation and leader role interactions. The fourth chapter describes the method of the paper, specifically, the participants in the study, design, apparatus, procedure, manipulations and measures. Chapter five discusses the results of the study, including descriptives, psychometrics, covariates, manipulation checks and hypothesis tests. The Sixth chapter is a discussion section that discusses the impact of leader strategy development, multi-team models, impact of leader coordination facilitation, leader role interactions, limitations and future research directions, as well as practical implications. The second half of the paper includes an impressive variety of tables, references and figures.

### *Analysis*

DeChurch did not directly define the purpose of the study through a purpose statement, but rather implied what the purpose of the study is in the final paragraph of chapter one.

According to Creswell (2003), a mixed methods purpose statement needs to convey both quantitative and qualitative purpose statements.

The introduction to DeChurch's paper followed a typical qualitative approach (Creswell, 2003), which laid out the premise for the study, including definitions that were important to understand including words associated to teams such as "synergy." The introduction also discussed studies which were similar to the one used in the dissertation. The concluding section of the dissertation's introduction states important limitations and next steps for research on multi-team systems and team leadership studies.

The literature review section covers theories and summarizes that teams leading teams need to both establish conditions necessary for effective coordination during transition phases and work to improve coordination during action phases (DeChurch, 2002). The literature review is twenty-six pages long. The literature review appear to do an effective job of starting by describing an expectation of the research so that key decisions and conclusions could support or refute assumptions made by a specific individual or group of individuals (Lynham, 2002).

Chapter three discusses a model of multi-team leader effectiveness in depth. Included in this section are thirteen hypotheses for the research. Creswell (2003) believes that mixed methods studies need to have both qualitative and quantitative research questions (and hypotheses). The hypotheses need to incorporate the elements of good hypotheses. Some attention should be given to the order of research questions and hypotheses and should introduce questions at the beginning of each phase. This paper does a minimal job at doing any of the above. Also, the research probably should have written on a more focused topic that could have been more deeply analyzed. In doing so, it would have included very clear and specific conclusions (Verschuren, 2003).

In this mixed methods study by DeChurch (2002), chapter four—method, included theory deductively testing and verifying theory as suggested by Creswell (2003, p.136), as a well-written mixed method study should. Procedures were described in this section and conducted in three phases.

Chapter of DeChurch's (2002) dissertation discusses the results of the study. Much of the results were descriptive using quantitative analysis and included a test metrics of the study and included research criteria that could allowed the results of the research to meet the desired goals of the study (Maxwell, 1996).

What is interesting to note is that although much of the information discussed in chapter five were in a quantitative format discussing the results and the data; a great deal of qualitative information and descriptors were discussed. This is primarily due to the nature of the data dealing with qualitative information—mental models.

Also, in chapter five, there is a great deal of referencing to other chapter within the dissertation to show a relationship throughout the study to literature, application or theory. The results were tested for validity. According to Achenbaum, it is not necessary for researchers to always have test results come to the exact same conclusions. This is because, very often there is a higher concern for validity in the research results if there are no opposing perspectives to the information (Achenbaum, 2001). This paper clearly tested the hypotheses and came out with varied and documented responses.

### *Limitations*

Creswell (2003) says that limitations identify potential weaknesses of the study. DeChurch's (2002) study states that the possible largest limitation of the study is that short-term

teams were used in a laboratory simulation and that it is likely that contextual factors present important boundary conditions on the relationships examined in the study.

Sample size may also be a limitation of the study. DeChurch (2002) believes that future work is needed to examine larger samples of multi-team systems or fewer relationships per study in order for a more detailed analyses can be conducted.

### *Comments*

At best, this study by DeChurch (2002) could have been better written in order to look for distinguishing characteristics, elemental properties and empirical boundaries to come up with more definitive results (Nau, 1995). Although there was a great deal of quantitative data and qualitative data analyzed, there appears to be no distinct conclusion to the study. The tables used at the end of the dissertation clearly show the data and how it can be compared and contrasted for result analysis and hypothesis testing.

### *Lessons Learned*

This dissertation by DeChurch (2002), was a mediocre mixed methods research paper, yielding indefinite results and founded upon a controlled setting that used mental models for qualitative analysis and tested using quantitative analysis. Although the premise of doing a mixed methods study should result in a research paper grounded in methodologies of the best of both worlds; both qualitative and quantitative, it uses the methodologies as described by Creswell (2003), very poorly and turned out a piece of work that does nothing but merely going through the motions of doing dissertation research.

It is interesting to note that there are no timelines or dates mentioned in the study to show how long the study had taken. The teams were built around video games for testing and the participants were young college students. It should probably have noted that the demographics of the teams used in the study could also have been a limitation of such a study and could yield very different results if varying aged workers in a manufacturing facility were used.

### Conclusion

Each of the three dissertations studied in this paper had a differing research methodology. Various types of research methodologies seemed to require different types of data and different ways to test and write ideas in the hypotheses. The qualitative paper was well-written and clearly used literature on leadership to ground the study. The groups tested were in differing industries, but yielded results that helped assess conclusions that gave this dissertation a conclusion that is difficult to argue with.

The quantitative dissertation had the fewest amount of overall pages and was also well-researched. The data was easily researched and clearly written. It was tested using a couple of quantitative analysis methods which helped prove the hypothesis with little room for argument, as validity appears easier to test with quantitative than with qualitative data.

The mixed methods dissertation was not written well, nor did it appear to be well-founded in theory. It attempted to use both qualitative and quantitative methods of research to come to some conclusions about multi-team systems, but perhaps, chose the wrong tools. A mixed methods study can be the best way to cover research topics that deal with people's perceptions or difficult to quantify data, while using quantifiable information to validate hypotheses and questions.

## References

- Achenbaum, A. (2001). When good research goes bad. *Marketing Research*, 13(4), 13-16.
- Babbie, E. (2001). *Survey research methods* (9<sup>th</sup> ed.). Belmont, CA: Wadsworth.
- Bass, B. M., & Avolio, B. J. (2000). *Multifactor Leadership Questionnaire Form 5x-Short* (2<sup>nd</sup> ed.). Redwood City, CA: Mind Garden Inc.
- Bryman, A. (1992). *Charisma and leadership in organizations*. London: Sage.
- Bryman, A. (1994). *Quality and quality in social research*. London: Sage.
- Cavazzoni, M. L. (2002). *Evaluating the Impact of Corporate Executive Leadership Programs: Impacts on Executive Behaviors* (Dissertation). Malibu, CA: Pepperdine University.
- Collins, J., & Porras, J. (1994). *Built to last: successful habits of visionary companies*. New York: Harper Collins.
- Crotty, P., & Soule, A. (1997). Executive education: Yesterday and today, with a look at tomorrow. *Journal of Management Development*, 16(1), 4-21.
- Creswell, J. (2003). *Research Design*. Thousand Oaks, CA: Sage Publications.
- DeChurch, L. A. (2002). *Teams Leading Teams: Examining the Role of Leadership In Multi-team Systems* (Dissertation). Miami, FL: Florida International University.
- Denison, D. (1990). *Corporate culture and organizational effectiveness*. New York, NY: John Wiley & Son.
- Dilanthi, A., Baldry, D., Sarshar, M. & Newton, R. (2002). Quantitative and qualitative research in the built environment: Application of "mixed" researched approach. *Work Study*, 51(1), 17-32.
- Dialsingh, I. (2003). Introduction to quantitative research methods: An investigative approach. *Journal of Applied Statistics*, 30(1), 103-104.
- Easterby-Smith, M. (1991). *Management Research: An introduction*. London: Sage Publications, Inc.
- Fulmer, R., & Bibbs, P. (1998). Lifelong learning at the corporate university. *Career Development International*, 3(5), 177-184.
- Godin, S. (2002). *Survival is not enough*. New York, NY: The Free Press.
- Horna, J. (1994). *The study of leisure*. Oxford: Oxford University Press.

- Lynham, A. (2002). Quantitative research and theory building. *Advances in Developing Human Resources*, 4(3), 242-277.
- Marshall, C. & Rossman, G. (1995). *Designing Qualitative Research*. Thousand Oaks, CA: Sage.
- Maxwell, J. A. (1996). *Qualitative research design: An interactive approach*. Thousand Oaks, CA: Sage Publishing.
- McGrath, J. E. (1982). *Dilemmatics: The study of research choices and dilemmas*. Beverly Hills, CA: Sage Publications.
- Nau, D. (1995). Mixing methodologies: Can bimodal research be a viable post-positivist tool? Retrieved July 25, 2003 from <http://www.nova.edu/ssss/QRIQR2-3/nau.html>.
- Northouse, P. G. (2001). *Leadership: Theory and Practice*. Thousand Oaks, CA: Sage Publications, Inc.
- Patton, M. Q. (1997). *Utilization Focused Evaluation: The New Century Text*. Thousand Oaks, CA: Sage.
- Philippidis, A. (1997). GE renovates trend-setting training center. *Fairfield County Business Journal*, 36(23), 12-13.
- Phillips, D. C., & Burbules, N. C. (2000). *Postpositivism and educational research*. Lanham, MD: Rowman & Littlefield.
- Rich, C. (2002). *Transformational and Transactional Leadership as a Function of Management Level in Service and Manufacturing Organizations* (Dissertation). San Diego, CA: Alliant International University.
- Rucker, R. (1999). Maintaining market leadership through learning. *Supervision*, 60(9), 3-7.
- Sashkin, M. (1995). *Leader behavior questionnaire: The visionary leader*. Human Resource Development Press, Inc. Amherst, MA.
- Skinner, D., Tagg, C. & Holloway, J. (2000). Managers and research: The pros and cons of qualitative approaches. *Management Learning*, 31(2), 163-181.
- Wilson, D. (1996). The future for development centers. *Career Development International*, 1(6), 4-11.
- Verschuren, P. (2003). Case study as a research strategy: some ambiguities and opportunities. *International Journal of Social Research Methodology*, 6(2), 121-140.