

**Identifying and Developing Critical Management Skills  
in the Company Officers of the Scioto Township Fire Department**

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## CERTIFICATION STATEMENT

I hereby certify that the following statements are true:

1. This paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.
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Signed: \_\_\_\_\_

Printed Name: Porter R. Welch

## ABSTRACT

The problem that this research project addressed was the identification of critical management skills and the methods to develop those skills among the company officers of the Scioto Township Fire Department. The purpose of this research project was to develop and improve the management skills of the company officers of the Scioto Township Fire Department.

The descriptive research method was used to answer the following questions:

1. What are the critical management skills for company officers?
2. How have fire departments addressed the lack of management skills in their company officers?
3. Should the need for management skills be addressed within the promotional criteria and/or process for company officers?

The procedures involved surveying forty-nine fire departments within Franklin County, Ohio and the contiguous counties, which employed full-time personnel.

The results demonstrated that operation of local government, leadership, budgeting/finance, legal issues, time management, interpersonal relationships, and written communication were the most common management skill deficiencies among company officers, regardless of seniority.

The most common management training methods were elective continuing education, Company Officer Development I/II courses, tuition reimbursement, and informal mentoring. Company Officer Development I/II, Ohio Fire Executive/Executive Fire Officer, and elective continuing education were ranked as the most-effective means of improving management skills,

while formal mentoring program, tuition reimbursement program, and informal mentoring program were ranked as the least-effective tools to improve management skills.

The most commonly utilized promotional criteria/processes were minimum years of service, oral interview, and written test. Assessment centers, record of job performance, and oral interviews were ranked as the most effective promotional criteria and/or processes.

Recommendations were made to further research the critical management skills necessary to be an effective company officer. Resources should be allocated to provide company officers and firefighters with basic fire-service management training and focused, college-level educational experiences. Scioto Township's company officer promotional criteria/processes should adopt an oral interview component and record of job performance component.

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## INTRODUCTION

### **Statement of the Problem**

The management structure within most fire departments is hierarchical. A group of firefighters report to a company officer, who in turn reports to the chief or a chief-grade officer. At the direction of the fire chief, the company officer must organize and lead his or her group of firefighters to execute the directives of the fire chief and the policies of the department. The responsibilities of the company officer include managing the daily operations of the fire department within the guidelines established by the fire chief. The successful execution of the decisions of the chief, the implementation of the policies of the department, and management of the daily operations of the department are directly related to the strength of the management skills of the company officer. Without strong management skills, the company officer cannot manage the daily operations of the organization, let alone implement the policies of the department or the directives of the chief. *The problem that this study will address is to identify the critical management skills and methods to develop those skills in the company officers of the Scioto Township Fire Department.*

### **Purpose of the Study**

*The purpose of this research report is to develop and improve the management skills of the company officers of the Scioto Township Fire Department.*

## **Research Questions**

*The research method chosen for this applied research project is the descriptive method. Specifically, fire chiefs in Central Ohio will be surveyed to provide information regarding the following questions:*

- 1. What are the critical management skills for company officers?*
- 2. How have fire departments addressed the lack of management skills in their company officers?*
- 3. Should the need for management skills be addressed within the promotional criteria and/or process for company officers?*

## **BACKGROUND AND SIGNIFICANCE**

The management structure of most fire departments is based on the principle of “span of control.” This principle states that one individual can effectively manage only six to eight other individuals. Most fire departments are managed by one individual, typically the fire chief. The fire chief may have one or more assistant chiefs that report to the fire chief. In turn, there are one or more company officers that report to the assistant chief(s). The company officer typically holds the rank of Captain or Lieutenant. At the base of the management structure, a group of six to eight firefighters reports directly to a company officer.

As this model management structure demonstrates, the largest number of employees within the organization typically reports to the first level of management, the company officer. Also, based on the span of control principle, there is at least one intermediary level of management between the fire chief and the firefighters. As in any fire department, the fire chief

will issue orders, draft directives, and make decisions for the organization. The governing body, i.e., township trustees, city council, etc., will make policy for the fire department. The successful implementation, execution, and enforcement of the orders, directives, decisions, and policies of the fire chief and governing body, though, ultimately rests with the company officer. If the company officer is to effectively carry out the decisions of the fire chief and government leaders, and the organization is to operate properly, then the company officer must have a strong set of management skills. If the company officers of a fire department do not possess strong managerial skills, the organization itself cannot succeed.

Historically, the Scioto Township Fire Department has promoted firefighters to the ranks of company officer based on seniority, experience, personality, and many times based on no reason at all. When a vacancy occurred, notice of the vacancy in a Lieutenant's position was posted, a written test was administered, and an interview was conducted. No consideration was given to minimum requirements or a candidate's management skills or abilities. Once promoted, the Lieutenant was not encouraged or even given the opportunity to attend any officer development classes. Administrative or management responsibilities were strictly controlled by the Fire Chief, who refused to delegate management tasks or even daily responsibilities, allow officers to communicate with the public, learn about or participate in the budgeting process, or initiate discipline. Lieutenants were responsible for managing emergency incidents, but had no authority or responsibility to manage their personnel and the day-to-day activities of the Department. Essentially, Scioto Township firefighters have been promoted to Lieutenant with no training in management skills, no consideration for their ability to manage personnel, and no authority or responsibility to manage their personnel.

The results have been catastrophic for almost every aspect of the Department. By the fall of 2005, the Department had fallen into chaos and distrust because company officers were ineffective and could not maintain control of the organization. The company officers could not make decisions regarding daily staffing issues, personnel conflicts, discipline, and the myriad of problems that arise on a daily basis. Company officers did not provide written documentation of the daily activities of the Department, nor of sentinel events that may have occurred, including discipline. All employees, including the company officers, had no concept of the Department's budget, including how revenues collected, allocated, and expended. This led to meaningless spending at times, a failure to expend funds for necessary purchases, an unfounded reliance on the Township's general fund to supplement the Fire Department, and anger and distrust between the employees and management with respect to the Department's financial operations. In many instances, the company officers did not abide by the requirements of the collective bargaining agreement, mandatory reporting requirements for employee injury and exposure were not followed, the few standard operating procedures that existed were disregarded, and discrimination and harassment were rampant.

Employees distrusted each other and there was total disrespect amongst the employees and of the officers. Morale was non-existent. Employees were frustrated and confused because they did not have direction, nor did they understand the goals of the organization. The company officers became disillusioned and ineffective because they were caught between management and their employees. The Board of Trustees, the Fire Chief, and even the community were frustrated because the Department was not moving forward and the initiatives and objectives of the Department leaders could not be implemented or achieved.

Within the Scioto Township Fire Department, the lack of managerial skills has resulted in a significant amount of discord between management and the employees because the company officers have not developed the skills necessary to manage their subordinates and the daily operations of the Fire Department. There is no focus or structure to the daily activities of the Department. Disciplinary issues are left unaddressed and employees feel free to disregard the instructions or orders of their officers. The public and government leaders question the genuineness of the firefighters. The goals and objectives set-out by the Chief are not accomplished or are done so with delay and minimal effort. There is a lack of trust and understanding between management and the employees, as well as among the employees themselves.

Without significant restructuring of the Department, an enormous investment of time and financial resources, and a massive overhaul of the collective bargaining agreement, the organizational characteristics of Scioto Township will remain the same. What can change, though, is the training provided to and required of current and potential company officers. As Pernick (2001) has noted, “The time-honored way of learning one’s technical specialty, and then somehow transitioning into supervision is not a reliable method for producing adequately trained staff. Most organizations need a vigorous and deliberate way to improve the skills of supervisors, managers, and executives. They need a leadership development program (LDP).”

*The potential impact that this study could have on the Scioto Township Fire Department is to transform the company officer corps of the Department into an organized, effective group of professionals working together as leaders to better the organization and the services provided to the community.*

## LITERATURE REVIEW

The current literature addresses the first research question in many different ways. While some literature attempts to identify, define, and resolve common deficiencies found within the managerial ranks of today's corporate world, much of the literature also examines what characteristics and/or skills comprise an effective manager and the barriers to developing those characteristics and/or skills. It is important to note that the Conference Board, et al. (2006) recently conducted a study of 431 human resources officials to survey employers' views on the readiness of recent graduates from high school, 2-year colleges, and 4-year colleges. The study found that while technical skills are still fundamental to performing their job requirements, applied skills such as teamwork, critical thinking, and communication are essential to be successful. In addition, recent graduates are not adequately prepared in these essential applied skills.

Additional research supports the concept that deficiencies in applied skills may create difficulties for new managers. Peak (1996) noted a study conducted by Manchester Partners International that four out of ten newly promoted managers fail in their jobs in the first eighteen months, resulting in resignation, termination, or poor performance reviews. The top reasons for failure: confusion as to what was expected of them; inability to make tough decisions; too much time needed to learn; failure to work as a team with subordinates and peers; lack of political savvy; and, failure to balance work and personal time.

James (1996) provides an anthropological perspective to the skills necessary for a successful manager in today's society. She explains that American business, economics, and society are changing at an extraordinary speed. Success in this environment requires managers,

among others, to learn faster, think smarter, and break free of confining assumptions and old mindsets. Leadership ... requires courage, character and a broader perspective. Ultimately, the key to success is the ability to think in the future tense. The skills required to think in the future tense include: perspective; pattern recognition; cultural knowledge; flexibility; vision; energy; new intelligence; and, global values.

Further research supports the notion that the success of managers is due to their applied skills, and not their technical competence. Kaplan and Kaiser (2003) explain that a common problem found in recently promoted senior executives is their difficulty in adjusting their skill sets to the requirements of their higher-level jobs. The authors' experiences have shown that it is helpful to define leadership skills in terms of paired approaches. In turn, leadership effectiveness is the ability to draw freely from two opposing sides as appropriate for a given situation, i.e., the ability to be versatile. The authors have found that the two most important paired approaches are the balance between forceful leadership and enabling leadership, and the balance between strategic leadership and operational leadership. Using a 360-degree questionnaire, the authors' research concluded that the overwhelming majority of leaders are not versatile. Instead, they show a bias in favor of one characteristic, i.e., forceful leadership, and a prejudice against the complementing characteristic. The causes of this lack of versatility are attributed to uneven skill development, skewed mental models, one-sided values, fear of inadequacy, and a tendency to polarize.

Baker and Newport (2003) synthesize previously conducted research in the area of dysfunctional behavior and codependency, as a possible explanation for dysfunctional behavior of managers in the workplace. The authors explain that codependent patterns of behavior include: perfectionism; over-controlling; manipulation; lack of trust; lying; and, avoiding

decision making and confrontation at all costs. Children from a dysfunctional home grow into dysfunctional adults, who in turn carry dysfunctional behaviors into the workplace. The link between codependency and the workplace is culture. An organization's culture is shaped by individuals who may bring with them into the workplace patterns of codependency and dysfunctional coping skills. The codependent supervisor creates a myriad of problems within the workplace. The codependent supervisor is reluctant to delegate and cannot work well with teams because of their controlling nature. They discourage creativity, productivity, and a sense of ownership among subordinates. The codependent supervisor thrives on crisis, and will create one where it does not exist. Subordinates become discouraged because their best is never enough for their perfectionist supervisor. As the subordinate suffers, so does the entire organization.

Higgs and Hender (2004) attempt to identify the characteristics of the creative manager and determine which are most important in today's business world. The key behind their research is that an effective and/or successful manager is a creative manager. The authors' prior research lead them to the conclusion that creative performance is a function of genetic and environmental factors, personality, cognitive ability and style, domain knowledge and skills, intrinsic motivation, attitudes and beliefs, and creative abilities and behaviors. For purposes of the current paper, the authors conducted two studies. The first study, consisting of interviews and focus group meetings, attempted to determine how managers judge creativity and their perceptions of the attributes of a creative manager. Of the forty characteristics identified in the first study, the top five were: persistent; determined; energetic; passionate about ideas; and, hard working. The purpose of the second study was to confirm the results of the first study. The second study consisted of interviews with senior managers. Rather than a list of characteristics,

the second study produced a number of bi-polar constructs, i.e., open versus closed. The overall results were varied. Ultimately, the authors and their studies concluded that creative managers are open, driven, energetic, unorthodox and different, experimenting, have self-confidence, are able to tackle conflict, are intelligent, have the ability to think outside the box and generate ideas, have wide knowledge, and will challenge other's ideas.

The current literature presents multiple responses to the second research question. Just as there are multiple management skill issues and/or problems, corporations and the academics have developed numerous ways to address skill issues. Many larger corporations have developed internal or external management training programs. Meister (1998) discussed an outline of how corporations and universities are developing new collaborative relationships to update and expand the knowledge base of the corporation's employees. The initial step in this process is to create a vision of the educational partnership. Second, the corporation must select an educational partner based on criteria incorporating the educational vision. Third, a business plan must be developed to execute the vision of the educational partnership. Finally, the academic and corporate partners can formalize the program(s) to be offered to employees.

Saari, Johnson, McLaughlin & Zimmerle (1988) conducted a survey of 1,000 randomly selected U.S. companies with at least 1,000 employees. The purpose of this survey was to assess what corporations are doing in terms of management training. The authors determined that corporations are doing little formalized investigation and/or assessment of their management training needs. Despite this lack of assessment, many corporations continue to provide management training opportunities, ranging from on-the-job training to formal college programs. Generally, the purpose of these programs is to develop the knowledge and skill base of the employee. In terms of curriculum, survey respondents cited a need for more attention to

strategic planning, managing people, marketing, ethics, finance, and computers. As a general rule, the larger the organization and the higher the employee's management ranking, the more formalized the training program and the greater opportunity to attend university-based instruction.

The support for management training programs in small firms, though, is not as strong as that found in large corporations. Storey (2004) examined the connection, in small firms, between management training and firm performance. The author's paper was based on the premise that small firms are less likely than large firms to provide employees with formal training. The author examined recent research findings regarding small firms in the United Kingdom, while drawing comparisons with small firms in Canada, Finland, Germany, Japan, and the United States. Storey's research drew several conclusions. First, there is only weak evidence to show that those small firms providing formal external workforce training perform better than those that do not. Second, there is no satisfactory assessment of the link between small firm, formal management training and firm performance. Finally, the lack of formal management training in small firms is an informed decision on the part of the firm's management.

The current literature presents an alternative to formalized management training programs. Manikutty (2005) argues that the effective development of managers requires that organizations must assume responsibility for training, coaching, and developing their managers. How well senior management develops and mentors junior managers will have a direct bearing on the performance of the organization. The author identifies four areas where senior managers can aid in the development of junior managers: as the first boss of new recruits; as a coach and trainer of managers at middle levels; as a disseminator and enabler of dissemination of ideas within an organization; and, as a coach and mentor to managers below them at all levels. The

author notes that management training programs typically do not have a lasting effect because the student does not have the time or opportunity to reflect and assimilate the lessons of the program into their own organization.

Another theory of management development is to rotate personnel through different jobs within the organization. Eriksson and Ortega (2006) developed an experiment to test three theories as to why firms adopt job rotation: employee learning; employer learning; and, employee motivation. The authors' research utilized data gathered from firms' personnel records and detailed surveys of Danish private-sector firms. The authors report that job rotation does not support the employee motivation theory, wherein rotating through different positions maintains employees' motivation. Their research does support, though, the employee learning and employer learning theories. These theories posit that job rotation allows employees to learn more about the organization and the employer to learn more about the employees' skills, respectively. Ultimately, job rotation helps the employee to learn more about the organization and improve themselves when they assume a managerial role. It also aids the employer in making promotional decisions with respect to the strengths and weaknesses of the employee.

In line with the research of Baker and Newport (2003) mentioned above, Appelbaum and Shapiro (2006) have examined the impact of deviant behaviors on organizations, why employees engage in such behavior, why deviant behavior thrives in some organizations, and possible solutions. While the authors' research and recommendations do not revolve around or constitute a means to train managers, their recommendations are valid nonetheless. The authors recommend that the organization adopt a new culture based on important ethical core values, and that this culture must be actively promoted by management. They also recommend frequent

background checks of employees and stop any deviant behavior as soon as it is detected; otherwise, there must be fair punishment tied to the organizational norms.

The current literature does not specifically address the criteria that should be included within a promotional process. Rather, within the context of the third research question, the literature examines the use of assessment centers and other processes as promotional decision-making tools and relevant considerations for any promotional process. Yeager (1986) provides the most relevant examination of assessment centers and their use as a promotional tool. The author surveyed fire chiefs from seventy-five metropolitan cities in the United States and Canada. Thirty-two (43.8%) of the surveyed fire departments indicated that they utilize an assessment center in making promotional decisions. Yet, none of these departments rely solely on the assessment center in making promotion decisions. The author's research also found that assessment centers are most often used to fill mid-level and higher ranking management positions. The respondents average four exercises in their assessment center, with in-basket, leaderless group, structured interviews, problem solving, written exercises, and fire scene incident command being the most commonly used exercises. The average weight given to the assessment center in the overall promotional process is 62 percent.

Spychalski, Gaugler, and Pohley (1997) present an updated survey of assessment center practices in the corporate world. Of the 655 surveys distributed, 215 individuals returned surveys and indicated that they utilized an assessment center process. The authors discovered several key similarities among the survey respondents. First, assessment centers are generally designed by consultants and are based upon job analysis data. Second, they are frequently used for selection, promotion, and development planning. Third, in-basket and leaderless group

exercises are among the most frequently used assessment tools, along with interviews, analysis problems, presentations, and interview simulations.

McEvoy and Beatty (1989) have examined the validity of assessment centers in selecting and promoting managers. The authors make note that prior to their research, there existed little direct evidence or research to demonstrate that assessment centers were any more valid in predicting the best managerial candidates than other more easily obtainable rating methods. The authors looked at sixty state law enforcement agencies and compared the results of their assessment center ratings and ratings by subordinates as predictors, and then examined promotional results, ratings by subordinates, and ratings by supervisors two, four, and seven years after the assessment center. In general, the authors' research demonstrates that over a period of time assessment centers are usually valid predictors of managerial performance.

The literature notes that alternative promotional processes exist. Baugher, Varanelli, Jr., and Hall (1994) reviewed the New York State Division of Budget's performance-based promotional selection system. The Division of Budget recognized that their former content-based oral and written examination promotional process was not producing the best candidates. In conjunction with Pace University, the Division of Budget developed a promotional system consisting of two tests. The first test assesses the candidate's level of training and experience against the position for which they applied. The second test measures the candidate's recent job performance on behaviors critical to performance in the new position. A verification committee reviews the results of the tests and determines the candidate's standing in the process. The authors reviewed this performance-based system since its inception ten years ago. Their results show that employees generally approve of and support the process. Also, employees' current performance has an impact on their promotional status. The new process allows flexibility in

when the promotional process is administered. Finally, the process encourages promotional candidates to improve themselves and seek training in line with the goals of the Division, as they learn the factors considered important by the Division through participation in the promotional process.

Finally, research exists to demonstrate that a minimum level of management training should be required for promotion to the project manager level. Carbone and Gholston (2004) reviewed graduate and certificate project manager programs. Seven corporations were benchmarked for their project manager development programs. Finally, the authors surveyed actual project managers. The authors' research concluded that very few organizations are developing their project managers. Citing Turner and Huemann (2000), the authors note that to develop skills in a profession requires formal education and practice. This leads the authors to the conclusion that a project manager development program, consisting of multifaceted formal training and experiential learning, will improve the competencies of the project manager and in turn the success of the company's project initiatives.

The literature review was helpful in terms of redirecting and guiding the focus of this research project. First, rather than attempt to create an entire employee development program, the literature review helped to clarify the project's focus to first identifying the management skill issues among company officers. Second, the literature review provided insight as to programs and processes other organizations have initiated to address management skill issues and the results of those programs. Finally, examining relevant considerations for promotional processes provided an additional view toward how organizations value and "recognize" proficiency in management skills.

## PROCEDURES

To answer the questions posed, the descriptive research method will be used. The primary means to answer the three research questions is to conduct a written survey. The survey is constructed with the intent of determining what management skill issues other organizations have experienced and how they have addressed those skill issues. The compiled data will be analyzed for similarities, trends, and and/or discrepancies. In turn, this information can be used to formulate a plan to improve company officers' management skills within the Scioto Township Fire Department. The survey is divided into four different sections.

The first section of the survey focuses on the different types of management skills that other organizations find that their company officers are lacking. The management skills are surveyed against the experience level of the company officer. The respondents are also polled for their perception of the importance of competency in each of the listed management skills. The management skills are derived from the literature review and the job description for the company officer position (Lieutenant) within the Scioto Township Fire Department. The experience scale is divided into three levels: zero to one year of experience as a company officer; one to five years as a company officer; and, five years and above. This scale was developed to be able to compare the management skill problems found among new, somewhat experienced, and experienced company officers.

The second section of the survey focuses on the different measures that other organizations have employed to resolve issues with, and improve, the management skills of their company officers. The respondent is asked to detail the number of company officers that utilize the different measures and the amount of money spent on each measure, on an annual basis. The content of this portion of the survey was developed from the literature review of measures

implemented by different corporations, as well as programs offered through the Ohio Fire Academy and commonly available in fire departments throughout Ohio.

The third section of the survey focuses on the different criteria and processes that organizations have established to be promoted to company officer. Survey respondents are also asked to rate the effectiveness of each criteria/process in determining which individuals become strong performing company officers. The criteria and processes surveyed under this topic were developed through the personal experiences of the author, as well as various portions of the literature reviewed in support of this research project.

The final section of the survey focuses on gathering the demographic information of each responding agency. This information will allow study into whether or not the size of the organization, its budget, or other demographic factors have any relationship or correlation to the organization's management issues and/or the manner in which those issues are addressed.

The survey will be distributed to fire departments in the Central Ohio region that have full-time employees. The Central Ohio region includes forty-nine full-time fire departments in nine counties. The survey will be mailed on March 1 directly to each fire chief. A reply will be requested by March 15 and a self-addressed, stamped envelope will be provided. Departments that do not reply by March 22 will be sent a follow-up letter and electronic mail message, if available, requesting a response by March 29. Responses received after April 6 will not be included in the survey results.

There are several different reasons for limiting the distribution of the survey as outlined above. While an electronic survey may be easier and more cost-effective to distribute, receiving a packet of paper forces the respondent to take some action, rather than simply delete or ignore an email message. It also allows a level of formality that may make the respondent more likely

to answer and return the survey, and avoids any chance of computer software compatibility issues.

The Central Ohio region was chosen because of the diversity of organizations within a relatively small area. There are a large number of full-time fire departments, which vary in the number of personnel and their organization's financial status. This will provide a broader array of responses that will make the conclusions drawn from the survey more robust. The author also has personal contacts with most of the Central Ohio organizations and electronic mail capabilities with all of the organizations, which should aid in responsiveness to the survey and any necessary follow-up.

The survey was limited to the Central Ohio region to ensure that the availability of educational opportunities did not confound the survey results. This region is rich in educational institutions that have public safety programs and/or management training. In addition, the resources of the Ohio Fire Academy are physically close enough to all surveyed organizations so that the survey results cannot be confounded by limited access to the Academy's programs.

The survey is also limited to full-time fire departments to ensure that there is ample opportunity for a high incidence of the management skill issues to occur within the surveyed organizations. Management skill issues certainly occur in volunteer fire departments. The dynamics of a volunteer organization, though, are quite different than an organization comprised of full-time employees. A volunteer organization does not have the same group of people working together all of the time. The roles and responsibilities of company officers can vary greatly. Company officers and other employees are not together with enough frequency for there to be significant opportunities for management skill issues to develop.

Finally, the survey excluded the City of Columbus Division of Fire. This organization is the largest fire department in Central Ohio, with almost eighteen hundred employees. The size of this organization makes it unlikely that chief-grade officers are fully aware of the management skill issues of all their company officers. It is also unlikely that steps can be taken to address the specific management skill issues of their company officers, due to the size and complexity of the organization.

## **RESULTS**

The first research question examines what are the critical management skills for a company officer. This research question is answered by analyzing the most frequently cited management skill issues, and in turn, the prevalence of these issues across three experience levels. Based on this analysis, company officers' management skills are most lacking in: operation of local government; leadership; budgeting/finance; legal issues; time management; interpersonal relationships; and, written communication.

The results of the first section of the survey provided the data to answer this research question. Selected portions of the survey results are provided herein, with the complete results presented in Appendix A. For those company officers with one year or less experience in their position, the three most frequently cited management skill issues were: operation of local government; leadership, budgeting/finance, legal issues (tie); and, critical thinking, time management, interpersonal relationships (tie). For those company officers with two to five years of experience, the most common management skill issues were: leadership; budgeting/finance, operation of local government, legal issues (tie); and, written communication. Finally, the most

frequently cited management skill issues for company officers with six or more years of experience were: budgeting/finance; written communication, time management, legal issues, interpersonal relationships (tie); and, leadership and disciplinary matters. In terms of importance, the respondents ranked leadership, incident command, and critical thinking as the most important management skills. Legal issues, operation of local government, and budgeting/finance were ranked as the least important management skills.

There are three significant trends that can be realized from the data gathered in the first section of the survey. First, the management skills most lacking in company officers, i.e., operation of local government, leadership, budgeting/finance, legal issues, time management, interpersonal relationships, and written communication, are not fire service-specific management skills. These management skills are broad-based, general knowledge concepts introduced and developed as part of a management training curriculum or program. The respondents did not identify skills such as incident command, public relations, or instruction/training, typical fire service-related management skills as those company officers are most lacking. This first trend demonstrates that the fire service is generally successful in developing company officers' fire service-related management skills. On the other hand, the fire service is not providing the opportunities or means to develop the management skills necessary to operate the "business" side of the fire service.

The second trend discovered from the survey results is that in general, the same management skill issues are present regardless of the years of service held by the company officer. There are two likely reasons for this trend. First, as the literature review noted, there is little if any research into the areas of management training and public safety. In turn, there is very little organized direction and/or impetus for including management skill training within the

fire service or the development of the company officer. Second, public safety management training programs have been in existence for a relatively short period of time. Essentially, the fire service is only beginning to recognize these management skill issues amongst its company officers, and there are very few instructional programs available to respond to the situation.

The third trend involves the leadership management skill. The survey respondents noted that leadership is lacking in all experience levels of company officer. The respondents also indicated that it is the most important management skill. Therefore, the most important company officer management skill is also the management skill in which company officers are most commonly deficient.

The second research question asks how other fire departments have addressed the lack of management skills among their company officers. This research question is answered by examining the most commonly employed methods of improving management skills. Other fire departments have addressed the lack of management skills among their company officers' through: elective continuing education; Company Officer Development I/II courses; tuition reimbursement; and, informal mentoring.

The complete results of this portion of the survey are presented in Appendix B. The survey respondents indicated that elective continuing education, Company Officer Development I/II and tuition reimbursement programs (tie), and an informal mentoring program were the most frequently utilized means of improving their company officers' management skills. The respondents, though, ranked Company Officer Development I/II, Ohio Fire Executive/Executive Fire Officer, and elective continuing education as the most-effective methods of improving management skills. In turn, formal mentoring program, tuition reimbursement program, and

informal mentoring program were ranked as the least-effective tools to improve management skills.

There are two conclusions that can be drawn from the data collected in the second section of the survey. First, company officer development is a passive process. Elective continuing education, Company Officer Development I/II, tuition reimbursement, and informal mentoring are programs that unless required by the company officer's organization, will only be utilized at the initiative of the company officer. The organization's management is not taking active steps to identify, educate, or provide direction to current and/or potential company officers in terms of their management skill development.

The second conclusion is that some of the more commonly used management training opportunities, such as tuition reimbursement and informal mentoring, are also ranked as the least effective management training programs. There are potentially many reasons for this conclusion, which the survey results did not reveal. The annual cost of the program is not an explanation, as tuition reimbursement is the most expensive training option, while at the same time being one of the least effective options. Ultimately, both conclusions can be partially explained by considering the literature review. Developing and maintaining a management training program requires a significant investment of time and resources, which most organizations cannot afford to implement.

The third research question asks whether there is a need for management skills to be addressed within the promotional criteria and/or processes for company officer positions. This research question was answered by examining the criteria other organizations use to promote employees to company officer positions and what criteria the respondents found to be most effective. The criteria and/or processes most frequently used by other departments include

minimum years of service, oral interview, and written test. Assessment centers, record of job performance, and oral interviews are the most effective promotional criteria and/or processes. Due to the comprehensive nature of assessment centers and the flexibility of oral interviews, the need for management skills should be addressed within the company officer promotional criteria and processes.

The complete results of this portion of the survey are presented in Appendix C. Survey respondents indicated that the most frequently utilized promotional criteria and/or processes were minimum years of service, oral interview, and written test. On the other hand, respondents rated the most effective promotional criteria and/or processes as assessment center, record of job performance, and oral interview.

In examining the survey results, the most effective promotional processes and/or criteria are not the processes and criteria most frequently utilized. There are potentially several reasons for this dichotomy, which are not developed through the survey instrument. Examining the assessment center and record of job performance promotional criteria provides some explanation for this dichotomy. Internally developing an assessment center is difficult, at best, for the typical fire department. A commercially available program is simple to use, but is quite costly. Collective bargaining agreements may also limit or dictate the promotional processes and/or criteria that may be considered. Finally, quantifying employees' record of job performance or even comparing one employee to another can be very difficult and labor intensive.

The fourth section of the survey compiled demographic data from each responding organization. These results are presented in Appendix D. The average total budget for an organization is \$4,411,545.76. On average, \$31,532.50 or 0.7 percent of the overall budget is devoted to training. In turn, \$4,371.62 or 13.8 percent of the average training budget is spent

toward officer development. The average organization has 7.2 company officers with 1.97 or 25.9 percent of those company officers having a college degree. The average organization has 2.1 chief-grade officers with 1.27 or 55.1 percent of those chief-grade officers having a college degree.

There are two significant conclusions that may be drawn from the demographic data. First, very little money is spent on training and even less is spent on officer development. Second, only a quarter of our company officers have a college degree, while over half of the chief-grade officers have a college degree. Essentially, career advancement requires some level of college coursework and/or development, but the fire service is not financially supporting our company officers in those endeavors.

## **DISCUSSION**

The survey results generally reflect the principles that were developed in the literature review. Regarding the first research question, the literature review explained that inadequate job performance was due to deficiencies in applied skills, not technical skills. Conference Board, et al. (2006) noted that applied skills are essential to successful job performance and that recent graduates are not adequately prepared in the applied skills. Peak's (1996) and Kaplan and Kaiser's (2003) research also support the conclusion that successful job performance is not solely based on technical competence, but also adequate applied skills such as teamwork, critical thinking, and communication. The survey results also reflect the need for development of the applied skills in order for successful job performance. The survey respondents ranked leadership and critical thinking as two of the three most important management skills. The respondents also

listed applied skills such as operation of local government, leadership, and budgeting, for example, as management skills most lacking in company officers, rather than technical skills such as incident command or training.

With respect to the second research question, the survey results and the principles of the literature review were quite similar. Saari, Johnson, McLaughlin & Zimmerle (1988) determined that corporations are doing little formalized assessment of their management training needs, but continue to provide management training opportunities. Also, Manikutty's (2005) research demonstrates that how well senior management develops and mentors junior managers has a direct bearing on the performance of the organization. Both of these principles were reflected in the survey results. Many fire departments are providing management training opportunities to their employees such as elective continuing education, tuition reimbursement, and informal mentoring. But, management is not taking an active role in providing management training opportunities or formally mentoring their employees, as seen in the low utilization of formal mentoring programs or employee development programs.

Regarding the third research question, the survey results also support the conclusions drawn by the literature review. Yeager's (1986) study found that 43.8% of the surveyed fire departments utilize an assessment center in their promotional decisions and that the assessment center constitutes 62% of the entire promotional process. McEvoy and Beatty's (1989) research demonstrates that assessment centers are usually valid predictors of managerial performance. Baugher, Varanelli, Jr., and Hall (1994) demonstrated that performance-based promotional systems were effective indicators of job performance. The survey results are quite similar to the literature review in terms of the number of respondents that utilize an assessment center. In

addition, the respondents also ranked assessment centers and record of job performance as the two most effective promotional criteria of job performance.

The survey results in conjunction with the literature review lead to one overarching conclusion – upper level fire service management in Central Ohio has done little, if anything, to prepare or develop in company officers the management skills necessary for them to succeed at their job responsibilities. As the first section of the survey demonstrated, chief officers typically find that their company officers are lacking in the applied management skills. These applied management skills, though, are the management skills that the respondents rated most important to the company officer's successful job performance.

It is even more disturbing to couple the results of the first section of the survey with the second section. The second section of the survey showed that the most commonly utilized management skill development tools are those “passive” and basically left to the employee to initiate and/or complete. This section of the survey also elicited the fact that the more effective management skill development tools are also the most infrequently utilized tools.

The criteria and processes that we use to select and promote our company officers are also skewed. The respondents indicated that assessment centers and job performance are the most effective promotional criteria. But, these same promotional tools and criteria are also infrequently used by the responding organizations, as compared to minimum years of service or written and oral testing. Finally, the average fire department in Central Ohio spends less than one percent of its budget on officer development training and programs.

Within Central Ohio, upper-level fire service management has demonstrated that its company officers are failing at the most important management skills. Management takes little to no active role in developing the organization's company officers. Those tools that

management does employ to develop the company officer are generally regarded as the least effective tools. Little to no money is spent on specific training and development for our company officers. The promotional criteria used to select our company officers are also regarded as the least effective processes and criteria for promoting an officer. The fire service recognizes and understands what are the most effective or “best practices” for selecting a company officer and training that officer to be successful at their position. Despite this knowledge, the fire service continues to employ ineffective methodologies that result in ineffective company officers.

There are several reasons for this dichotomy. First, the culture of the fire service is rooted in tradition and hesitant, if not outright resistant, to change. In addition, unionized organizations may find it difficult or impossible to negotiate changes to promotional criteria and/or processes. Third, as Storey (2004) noted in his research: there is only weak evidence to show that those small firms providing formal external workforce training perform better than those that do not; and, there is no satisfactory assessment of the link between small firm, formal management training and firm performance. It is difficult to justify the time and resources to develop and implement the management training and promotional criteria/processes suggested by the survey and literature review, when there is no conclusive proof that these measures will work within the fire service. Fourth, considering many organizations’ financial limitations, there are few dollars to spend on management training or expensive assessment centers. Finally, the lack of research into the area of public safety management skill training and promotional criteria/processes, suggests that this is an unexplored field requiring further research.

The implications of the results for the Scioto Township Fire Department are enlightening, but also confirm the current issues faced by the organization. As was mentioned in the problem

statement, there is a lack of critical management skills within the company officers of the Scioto Township Fire Department. The survey results demonstrate that many other organizations within the same geographic region also experience the same management skill deficiency amongst their company officer ranks. The implication for Scioto Township, though, is that this research project has begun to identify the critical management skills necessary for a company officer to be successful in their position.

In terms of management training, the implication for Scioto Township is recognition of the fact that the organization has done little, if anything, to train its company officers. The survey results, though, do provide an informal guideline as to what management training tools other organizations have found to be effective. This will allow Scioto Township to begin implementing the training tools generally recognized as effective in developing company officers' management skills, without the need to independently make this determination.

The implication for promotional criteria and processes is reassuring, but leaves room for improvement. Scioto Township promotes its company officers based on a minimum number of years of service, a minimum level of certification, written test, and assessment center. The effective promotional criteria and processes that resulted from the survey and literature review confirm that Scioto Township has already implemented some of the "best practices." At the same time, there are effective criteria and processes suggested by the survey, i.e., record of job performance and oral interview that could still be adopted by Scioto Township.

## RECOMMENDATIONS

The results of this research project lead to several recommendations for the Scioto Township Fire Department. The first recommendation is to develop a comprehensive list of the management skills necessary to be an effective company officer. This recommendation would require an in-depth, scientific study of the job functions of a company officer. Since other organizations have indicated deficiencies in their company officers' management skills, it is likely that Scioto Township and other organizations could pool their resources to study this issue together. Before Scioto Township can address management skill training or modifying its promotional criteria and/or processes, it must know exactly what management skills are relevant and important to a company officers' success.

The second recommendation is to allocate the necessary resources and provide the required time for all Scioto Township company officers to attend effective, relevant management training courses. Examples of such training should include Company Officer Development I and II. Management training, though, should challenge the company officer and look outside the typical fire service training programs. If the "old-style" programs had been effective, then our company officers would not be experiencing the management skill difficulties mentioned in the survey. Scioto Township should examine programs and course offerings from local colleges and/or adult education institutions that can provide coursework focusing on the critical management skills relevant to company officers. These opportunities would provide focused, relevant, and generally cost-effective education that would enhance the company officers' management skills and make them more well-rounded employees. It is hoped that by exposing the company officers to these "new" educational opportunities, it will encourage current officers

and firefighters to take advantage of tuition reimbursement programs already available to them and improve the overall knowledge level and skill sets of Scioto Township employees.

The third recommendation is to create and adopt an oral interview component and record of job performance component within Scioto Township's company officer promotional criteria. Each of these components will require further in-depth research as to interview questions and methods by which job performance can be measured and compared against other candidates, and that act as effective and objective indicators of a candidate's potential as a company officer. Adopting these components will not only enhance the assessment center and other criteria already in place, but will infuse a historical perspective of each candidate that is not accounted for in the current promotional process. It is hoped that an expanded and improved promotional process will produce a better company officer candidate for the organization.

The final recommendation is a suggestion to the fire service in Central Ohio and throughout the state. The survey results clearly indicate that there are deficiencies in the management skills of company officers throughout all organizations. Also, these same organizations have limited funds to expend on management training. Based on these considerations, Ohio's fire service should work together to research and develop a management training program for its company officers. Collaboration would provide a cost-effective means to study the management skills necessary to develop employees into effective company officers. It would also permit the development of a standardized management training program that could be offered through existing educational channels like the Ohio Fire Academy or such a program may even develop into an opportunity similar to the Ohio Fire Executive Program. Current research supports such an initiative. As mentioned in the literature review, Carbone and Gholston (2004) concluded that very few organizations are developing their project managers.

Citing Turner and Huemann (2000), the authors note that to develop skills in a profession requires formal education and practice. The authors concluded that a project manager development program, consisting of multifaceted formal training and experiential learning, will improve the competencies of the project manager and in turn the success of the company's project initiatives.

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## APPENDIX A

### INCIDENCE OF MANAGEMENT SKILL ISSUES COMPARED

#### TO YEARS OF EXPERIENCE AND IMPORTANCE

Management Skill	0-1 Yrs.		2 - 5 Yrs.		6+		Importance
	Yrs.	Percent	Yrs.	Percent	Yrs.	Percent	
Leadership	14.00	37.84%	20.00	54.05%	17.00	45.95%	4.80
Oral Communication	10.00	27.03%	12.00	32.43%	12.00	32.43%	4.32
Written Communication	10.00	27.03%	17.00	45.95%	18.00	48.65%	4.09
Critical Thinking	13.00	35.14%	12.00	32.43%	14.00	37.84%	4.44
Budgeting/Finance	14.00	37.84%	18.00	48.65%	20.00	54.05%	2.59
Operation of Local Govt.	15.00	40.54%	18.00	48.65%	19.00	51.35%	2.85
Time Management	13.00	35.14%	12.00	32.43%	18.00	48.65%	3.76
Legal Issues	14.00	37.84%	18.00	48.65%	18.00	48.65%	3.50
Disciplinary Matters	12.00	32.43%	12.00	32.43%	17.00	45.95%	4.00
Task Delegation	11.00	29.73%	11.00	29.73%	11.00	29.73%	3.67
Incident Command	12.00	32.43%	11.00	29.73%	10.00	27.03%	4.58
Interpersonal Relationships	13.00	35.14%	16.00	43.24%	18.00	48.65%	4.21
Public Relations	8.00	21.62%	10.00	27.03%	9.00	24.32%	4.19
Instruction/Training	12.00	32.43%	14.00	37.84%	13.00	35.14%	4.03

## APPENDIX B

### UTILIZATION OF MANAGEMENT TRAINING OPPORTUNITIES

#### COMPARED TO COST AND EFFECTIVENESS

<b>Available Opportunities</b>	<b>Yes</b>	<b>Percent</b>	<b>No</b>	<b>Percent</b>	<b>Number</b>	<b>Annual Cost</b>	<b>Effective</b>
Formal Mentoring Program	4.00	10.81%	33.00	89.19%	2.33	\$0.00	3.1
Informal Mentoring Program	26.00	70.27%	11.00	29.73%	5.8	\$0.00	3.23
Periodic Performance Reviews	24.00	64.86%	13.00	35.14%	7.95	\$6,500.00	3.28
Tuition Reimbursement Program	29.00	78.38%	8.00	21.62%	2.95	\$10,167.00	3.2
Employee Development Program	11.00	29.73%	26.00	70.27%	5.18	\$5,200.00	3.43
Mandatory Secondary Education	4.00	10.81%	33.00	89.19%	6.83	\$9,000.00	3.33
O.F.E./Executive Fire Officer	18.00	48.65%	19.00	51.35%	2.5	\$3,313.00	3.58
Elective Continuing Education	32.00	86.49%	5.00	13.51%	5.04	\$4,492.00	3.5
Company Officer Development I/II	29.00	78.38%	8.00	21.62%	4.5	\$2,241.00	3.64

## APPENDIX C

### UTILIZATION OF PROMOTIONAL CRITERIA COMPARED TO EFFECTIVENESS

<b>Promotional Criteria</b>	<b>Yes</b>	<b>Percent</b>	<b>No</b>	<b>Percent</b>	<b>Effective</b>
Minimum Years of Service	34.00	92.00%	3.00	8.00%	3.41
Minimum Level of Certifications	28.00	76.00%	9.00	24.00%	3.62
Job Rotation	5.00	14.00%	32.00	86.00%	3.5
College Degree	7.00	19.00%	30.00	81.00%	3.14
Oral Interview	32.00	86.00%	5.00	14.00%	3.63
Written Test	31.00	84.00%	6.00	16.00%	3.42
Assessment Center	22.00	59.00%	15.00	41.00%	4.2
Record of Training	28.00	76.00%	9.00	24.00%	3.31
Record of Job Performance	28.00	76.00%	9.00	24.00%	3.9

## APPENDIX D

### DEMOGRAPHIC DATA

<b>Department</b>	<b>Annual Budget</b>	<b>Training Budget</b>	<b>Officer Devel.</b>
Westerville	\$11,103,411.00	\$53,317.00	\$9,700.00
Delaware	\$4,800,000.00	\$35,000.00	\$7,000.00
Harrison Township	\$820,000.00	\$15,000.00	\$0.00
Newark	\$10,000,000.00	\$65,000.00	\$10,000.00
Orange Township	\$6,500,000.00	\$130,000.00	\$29,500.00
Concord Township	\$2,000,000.00	\$40,000.00	\$5,000.00
Plain Township	\$3,500,000.00	\$35,000.00	\$5,000.00
Liberty Township	\$5,300,000.00	\$40,000.00	\$4,000.00
Heath	\$0.00	\$0.00	\$0.00
Grandview Heights	\$2,000,000.00	\$17,000.00	\$0.00
Franklin Township	\$4,065,000.00	\$0.00	\$0.00
Jefferson Township	\$1,200,000.00	\$10,000.00	\$0.00
Pleasant Valley	\$1,864,782.00	\$11,685.68	\$5,550.00
Mifflin Township	\$11,085,000.00	\$60,000.00	\$24,500.00
Worthington	\$5,000,000.00	\$20,000.00	\$4,000.00
London	\$1,000,000.00	\$10,000.00	\$0.00
Tri-Township	\$758,000.00	\$5,000.00	\$500.00
Norwich Township	\$11,000,000.00	\$100,000.00	\$0.00
Upper Arlington	\$7,600,000.00	\$50,000.00	\$0.00
Violet Township	\$5,600,000.00	\$45,000.00	\$0.00
Tri-County	\$365,000.00	\$5,000.00	\$0.00
Truro Township	\$6,000,000.00	\$14,000.00	\$0.00
Marysville	\$3,200,000.00	\$22,000.00	\$5,000.00
Monroe Township	\$1,200,000.00	\$22,000.00	\$0.00
Pleasant Township (F.C.)	\$1,800,000.00	\$0.00	\$0.00
Pleasant Township	\$650,000.00	\$20,000.00	\$0.00
Jackson Township	\$9,800,000.00	\$30,000.00	\$0.00
Whitehall	\$3,800,000.00	\$35,000.00	\$2,000.00
Prairie Township	\$3,580,000.00	\$10,000.00	\$0.00
Washington Township	\$15,800,000.00	\$114,700.00	\$40,000.00
Greenfield Township	\$980,000.00	\$15,000.00	\$2,000.00
Genoa Township	\$2,700,000.00	\$32,000.00	\$2,000.00
Bloom Township	\$2,256,000.00	\$10,000.00	\$0.00
West Licking	\$7,000,000.00	\$50,000.00	\$6,000.00
Circleville	\$1,200,000.00	\$0.00	\$0.00
Madison Township	\$6,300,000.00	\$30,000.00	\$0.00
Clinton Township	\$1,400,000.00	\$15,000.00	\$0.00
<b>AVERAGE</b>	<b>\$4,411,545.76</b>	<b>\$31,532.50</b>	<b>\$4,371.62</b>

## APPENDIX D

<b>Department</b>	<b>0-1</b>	<b>2 to 5</b>	<b>6+</b>	<b>No. of CO's</b>	<b>College Grads</b>	<b>Percent</b>
Westerville	0	3	16	19	2	10.53%
Delaware	1	1	3	5	3	60.00%
Harrison Township	0	0	3	3	0	0.00%
Newark	0	9	8	17	6	35.29%
Orange Township	1	3	2	6	1	16.67%
Concord Township	0	0	3	3	1	33.33%
Plain Township	0	3	3	6	2	33.33%
Liberty Township	0	4	4	8	2	25.00%
Heath	1	1	3	5	0	0.00%
Grandview Heights	0	2	2	4	3	75.00%
Franklin Township	0	2	4	6	1	16.67%
Jefferson Township	0	1	2	3	0	0.00%
Pleasant Valley	0	1	2	3	1	33.33%
Mifflin Township	2	8	5	15	3	20.00%
Worthington	0	2	5	7	3	42.86%
London	0	3	0	3	1	33.33%
Tri-Township	0	2	1	3	1	33.33%
Norwich Township	0	0	19	19	2	10.53%
Upper Arlington	0	1	12	13	4	30.77%
Violet Township	3	1	5	9	1	11.11%
Tri-County	0	0	3	3	0	0.00%
Truro Township	0	3	3	6	3	50.00%
Marysville	0	2	1	3	3	100.00%
Monroe Township	1	0	2	3	0	0.00%
Pleasant Township (F.C.)	0	0	3	3	0	0.00%
Pleasant Township	2	3	1	6	3	50.00%
Jackson Township	1	3	8	12	7	58.33%
Whitehall	0	4	5	9	2	22.22%
Prairie Township	0	1	5	6	1	16.67%
Washington Township	0	4	14	18	9	50.00%
Greenfield Township	1	2	0	3	0	0.00%
Genoa Township	1	2	0	3	0	0.00%
Bloom Township	0	0	3	3	0	0.00%
West Licking	0	0	14	14	3	21.43%
Circleville	1	0	5	6	4	66.67%
Madison Township	1	0	8	9	0	0.00%
Clinton Township	0	2	1	3	1	2.56%
<b>AVERAGE</b>	<b>0.43</b>	<b>1.97</b>	<b>4.81081</b>	<b>7.21621622</b>	<b>1.97</b>	<b>25.92%</b>

## APPENDIX D

<b>Department</b>	<b>No. of Chiefs</b>	<b>College Grads</b>	<b>Percent</b>	<b>FT</b>
Westerville	7	6	85.71%	82
Delaware	1	1	100.00%	45
Harrison Township	1	0	0.00%	10
Newark	5	4	80.00%	94
Orange Township	2	1	50.00%	69
Concord Township	2	1	50.00%	18
Plain Township	2	0	0.00%	30
Liberty Township	2	1	50.00%	51
Heath	1	0	0.00%	16
Grandview Heights	1	1	100.00%	17
Franklin Township	1	0	0.00%	39
Jefferson Township	2	1	50.00%	14
Pleasant Valley	2	0	0.00%	11
Mifflin Township	5	5	100.00%	65
Worthington	4	1	25.00%	39
London	1	1	100.00%	12
Tri-Township	1	1	100.00%	4
Norwich Township	2	1	50.00%	84
Upper Arlington	1	0	0.00%	61
Violet Township	2	0	0.00%	40
Tri-County	1	0	0.00%	3
Truro Township	2	2	100.00%	40
Marysville	2	2	100.00%	28
Monroe Township	1	1	100.00%	11
Pleasant Township (F.C.)	1	1	100.00%	10
Pleasant Township	2	1	50.00%	1
Jackson Township	2	1	50.00%	79
Whitehall	2	2	100.00%	41
Prairie Township	2	1	50.00%	29
Washington Township	5	4	80.00%	103
Greenfield Township	2	0	0.00%	7
Genoa Township	2	1	50.00%	20
Bloom Township	1	0	0.00%	16
West Licking	3	2	66.67%	53
Circleville	1	1	100.00%	17
Madison Township	2	1	50.00%	48
Clinton Township	2	2	100.00%	8
<b>AVERAGE</b>	<b>2.11</b>	<b>1.27</b>	<b>55.06%</b>	<b>35.54</b>