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ABSTRACT

The need for communication training of supervisors in a manufacturing environment has become critical as the 1990s approach. Effective communication skills are a key to the accomplishment of any industrial task and to the development of the subordinate/supervisor relationship. However, because of the complexity of communication, it is difficult to know which aspects of communication should be targeted for supervisory training to enhance effectiveness. The method most often used in industrial skills training is behavior modeling, which involves four key elements: the model, a checklist for understanding, practice, and feedback. The model can be a demonstration or example of the skill to be learned. A checklist for understanding provides the conceptual framework of what are the necessary checkpoints for success, why these checkpoints are important, and the performance requirements for optimal results. Practice is an essential key element for skill acquisition. As part of that practice, feedback about the practice is necessary so that the performers know when they have done well and how their performance could be improved. For example, Front Line Leadership, a program which employs behavior modeling, consists of two modules: "Getting Good Information from Others" (focused on non-verbal communication behavior) and "Getting Your Ideas Across" (focused on message preparation). (Twenty-one references are attached.) (JK)

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in a Manufacturing Environment

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## INTRODUCTION

The focus of this report is communication training for supervisors in a manufacturing environment. Adequate coverage of this topic requires responses to three main themes: the need for supervisory communication training in manufacturing or why we teach it; the difficulties of training content selection or what we teach and some practical industrial applications or how these programs are delivered to the supervisor.

The first section of this report will cover the need for training and why it is so important that, given the current state of manufacturing in our environment, communications should be given top priority on the training agenda. The next section will address the difficulties of content selection and the need for further research to clarify the complex issue of the relationship of supervisory communication style to effectiveness. The final section explores the current applications of how manufacturing organizations address the issue of communication training for supervisors.

### THE NEED FOR SUPERVISORY COMMUNICATION TRAINING IN MANUFACTURING

The need for supervisory communication training in

manufacturing has never become more critical as we approach the decade of the 1990's. From 1970 to 1980 there was a 24.8 percent decrease in the proportion of the American workforce for factory operatives while there was an increase of 3.1 percent in the proportion of the American workforce for service workers.<sup>1</sup> The swing year of the United States labor force from a manufacturing to service occupation makeup was 1980. In that year 20.6 million Americans were employed in manufacturing operations while 21.0 million were employed in service occupations.<sup>2</sup> The Bureau of Labor Statistics projects that by the year 1995 an additional 10.2 million service occupation positions will be available but manufacturing positions will increase only 2.6 million.

Lest we think that these declines in the number of people employed in manufacturing occupations are due to automation and productivity gains, let us be reminded that productivity in the private business sector of the United States has shown little or no growth since 1979<sup>3</sup>. The post World War II years saw United States labor productivity grow

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<sup>1</sup>Andrew I. Hacker and Lorrie Millman, eds., U/S: A Statistical Portrait of the American People (New York: Viking Press and Penguin Books, 1983), p. 125.

<sup>2</sup>U.S., Department of Commerce, Bureau of the Census, Statistical Abstract of the United States: 1985, 105th ed. (Washington, D.C.: Government Printing Office, 1984), pp. 400, 404-405.

<sup>3</sup>David Bain, The Productivity Prescription: The Manager's Guide to Improving Productivity and Profits, eds. William A. Sabin and Chet Gottfried (New York: McGraw-Hill Book Co. 1982), p. 3.

by more than three percent per year. During the mid-1960's productivity began to decline and from 1973 to 1977 it averaged only one percent. The year 1977 to 1978 saw productivity growth rate slow to less than one-half of one percent. In 1979, the productivity growth for the private business sector fell to a negative quantity. Since that time, intermittent, quarterly increases have been offset by losses.<sup>4</sup>

In this era of decline in manufacturing and productivity, the role of the supervisor assumes crucial importance. The supervisor is the key link between management and the workforce. While men like Lee Iacocca of Chrysler articulate a vision, it is the responsibility of the first-line supervisor to transform that vision into the reality of quality goods which successfully compete in international markets. Any resultant increase in productivity can only be facilitated by those responsible for getting the work done through people. At the basic operational level, this responsibility falls to the supervisor. Bain<sup>5</sup> states that productivity gains can only be realized when a supervisor affects constructive change in methods and equipment, by utilizing resource capacity and/or performance levels of workers.

T.D. McAdams of Kaiser Chemicals states that:

"Communications are the key to effective management of a

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<sup>4</sup>Ibid.

<sup>5</sup>Ibid.

production operation. . . Without appropriate attention to the role of communications the production supervisor will fall short of attaining the desired objectives."<sup>6</sup>

Agreement pervades the literature that communication is a key to supervisory effectiveness. Kleiner and Peterson<sup>7</sup> state that, "Effective communication skills are essential to the accomplishment of any task and the development of any type of relationship," in the subordinate/supervisor relationship. Levine<sup>8</sup> says that, "Communication effectiveness is a key element in productivity and job satisfaction." In a study of industrial safety, it was one of five variables which was validated for an effective industrial safety program model.<sup>9</sup> Timm<sup>10</sup> found that the supervisor's communication behavior had an impact on employee job performance.

Internationally, Rodeck<sup>11</sup> of the Australian Institute

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<sup>6</sup>T.D. McAdams, "Communications in a Manufacturing Environment: A Supervisor's Perspective," ABCA Bulletin 44 (December 1981):32-34.

<sup>7</sup>Brian H. Kleiner and Lorraine Peterson, "Techniques for an Effective Subordinate/Supervisor Relationship," Journal of Systems Management 34 (December 1983):22-25.

<sup>8</sup>Edward L. Levine, "Let's Talk: Tools for Spotting and Correcting Communication Problems," Supervisory Management 25 (July 1980):27-37.

<sup>9</sup>Charles F. Sparrell, Wayne A. Skwarlo, and Maryann P. Burke, "What Makes Industrial Safety Programs Effective?" Risk Management 30 (October 1983):22-28.

<sup>10</sup>Paul R. Timm, "Worker Responses to Supervisory Communications Inequity: An Exploratory Study," Journal of Business Communication 16 (Fall 1987):11-24.

<sup>11</sup>Paul Coombes, "Bringing the Foreman into the Frontline Fight," Rydge's (Australia) 59 (June 1986:30-31.

of Management predicts that properly trained supervisors could lift productivity in Australian industry by 50 percent. He suggests that the focus of this training should be on communication skills. In the United Kingdom, Styles<sup>12</sup> says that direct communication with workers is essential and non-involvement of first-line supervision is the root cause of many rank and file employee problems. There is general acceptance in the literature that there is a need for supervisory communication in manufacturing.

#### THE DIFFICULTIES OF CONTENT SELECTION FOR SUPERVISORY COMMUNICATION TRAINING

The focus of recent business literature in manufacturing has been on the chief executive officer and their efforts in foreign competition, quality improvement and hostile takeovers. The role of the supervisor in manufacturing organizations is not glamorous and, as such, has not been the area of major studies. The few published studies into supervisory communication related to perception and job satisfaction. There has been little research conducted that focuses on the variables of communication style as they related to supervisory effectiveness.

The answer to the question, "What do we mean by supervisory communication?" can be sought by examining

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<sup>12</sup>"Tony Styles Hopes His Company Is as Good at Building Employees as It Is at Conventional Construction," Personnel Management 16 (December 1984):45.

selected definitions of communication. McCroskey<sup>13</sup> says it is the process of one person stimulating meaning in the mind of another by means of a message. Norton<sup>14</sup> defines communication as the way one verbally and paraverbally interacts to signal how literal meanings should be taken, interpreted, filtered or understood. Models of interpersonal communication exist which suggest that it is a process comprised of a sender, encoding, a message, the channel, the decoding, a receiver and feedback. An examination of the definitions and models suggests measurable communication variables to both personal and supervisory effectiveness.

Norton<sup>15</sup> found that the variables of dominant, dramatic, contentious, animated, impression leaving, relaxed, attentive, open, friendly and communicator image were the domain of a communicator style construct. Later he distinguished attentiveness as separate from the generic concept of attention. Attentiveness was defined as a function of posture, verbal behavior and eye contact<sup>16</sup>. In yet a later

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<sup>13</sup>James C. McCroskey, An Introduction to Rhetorical Communication (Englewood Cliffs, New Jersey: Prentice-Hall, 1986), p. 3.

<sup>14</sup>Robert W. Norton, "Foundation of a Communicator Style Construct," Human Communicator Research 4 (Winter 1978):99-112.

<sup>15</sup>Ibid.

<sup>16</sup>Ibid.



study, Norton and Montgomery<sup>17</sup> defined openness as the manner in which the individual deals with information about the self as the individual knows the self to be.

Baker and Ganster<sup>18</sup> found that the elements of calmness, attentiveness, openness and friendliness were correlated with high levels of job satisfaction in the superior/subordinate relationship.

Bacon<sup>19</sup> conceptualized supervisory communication style as having three levels: traditional, problem-solving and coorienting. Each style was compared to the independent variables of role ambiguity, communication ambiguity and understanding. She concluded that the traditional style supervisor was perceived by the subordinates as being lower in communication ambiguity and also shared a higher understanding with their subordinates than the other styles. Hence, the traditional communication style resulted in effective supervisory communication. This study added to the body of knowledge on the topic of ambiguity in the supervisory communication process. Moreover, it suggested that

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<sup>17</sup>Robert Norton and Barbara Montgomery. "Style, Content, and Target Components of Openness," Communication Research 9 (July 1982):399.

<sup>18</sup>Douglas D. Baker and Daniel C. Ganster, "Leader Communication Style: A Test of Average Versus Vertical Dyad Linkage Models," Group & Organization Studies 10 (September 1985):242-59.

<sup>19</sup>Constance Conlee Bacon, "The Relationship between Supervisory Communication Style and Ambiguity in Superior-Subordinate Communication" (Ph.D. dissertation, University of Oklahoma, 1982), p. 74.

communication styles may differentiate effectiveness levels of supervisors.

A number of researchers, notably Lesniak<sup>20</sup> and White, Crino and Hatfield<sup>21</sup> found that strong supervisory communication skills led to employee job satisfaction. McCullough<sup>22</sup> stated that job satisfaction was related to job proficiency. The research has shown that effective communication is essential to achieve productivity in a manufacturing environment.

The research, however, is not clear as to the aspects of supervisory communication style which contribute to effectiveness. The major difficulty then becomes which specific attributes of communication should be targeted for supervisory training to enhance effectiveness? Are there identified style variables of communication which contribute to overall productivity levels? The answers to these questions would provide a more targeted approach to the training of first-line supervisors and more effective industrial training programs.

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<sup>20</sup>Richard Henry Lesniak, "The Role of Vertical Communication Relationships in Traditionally Structured, Complex Organizations" (Ph.D. dissertation, State University of New York at Buffalo, 1981), p. 247.

<sup>21</sup>Michael C. White, Michael D. Crino, and John D. Hatfield, "An Empirical Examination of the Parsimony of Perceptual Congruence Scores," Academy of Management 28 (September 1975):732-37.

<sup>22</sup>Rose McCullough, "Effective Communication Keeps Employees at Peak", Rough Notes 115 (October 1972):90-92.

Current designs are shotgun in nature. That is, because we are not sure which specific aspects of supervisory communication in a manufacturing environment are crucial to effectiveness, we bombard the supervisor with training programs in communication and hope that we have hit the target. This whole subject area is one in which further research is needed to clarify this complex issue.

In a recent study, Rybczyk<sup>23</sup> found there was a significant relationship among the variables of communication style and supervisory effectiveness. The communicator style variables of friendly, impression leaving and relaxes explained 59 percent of the effectiveness variable. The more a supervisor can communicate in an unhostile manner, manifest a visible or memorable style of communication and not appear tense and anxious, the more likely they are to be effective. This study helped to clarify the issue.

#### PRACTICAL APPLICATIONS OF COMMUNICATION TRAINING FOR SUPERVISORS IN A MANUFACTURING ENVIRONMENT

Communication is a skill and, as such, behavior modeling is the delivery system most often used in the manufacturing setting. If communication was strictly a knowledge issue, training departments across the country could

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<sup>23</sup>Edward Joseph Rybczyk, "The Relationship of Communication Style to Effectiveness Among Manufacturing Supervisors," (Ed.D. dissertation, University of Bridgeport, 1987), p. 88

distribute one of the may fire primers on this subject and there would be no communication problems in manufacturing environments. Supervisors could read the book and be excellent communicators. However, effective supervisory communication is not the result of more knowledge. It is the implementation of actions which bring about the desired results.

The method most often used in industrial skills training is behavior modeling. Decker<sup>24</sup> reports that most human behavior is learned observationally through modeling. He further offers that ". . . about 85 percent of potential leader behavior is learned through a modeling approach."

Mayer and Russell<sup>25</sup> found that behavior modeling is effective in organizational settings, however, the reasons are not as clear as supposed and that further research is needed into this training methodology.

Behavior modeling involves four key elements: the model, a checklist for understanding, practice and feedback. The model can be a demonstration or example of the skill to be learned. It can be live or videotaped, however, as Jack Zenger<sup>26</sup> says, "If a picture is worth a thousand words, then a

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<sup>24</sup>Phillip J. Decker, "Social Learning Theory and Leadership," Journal of Management Development 5 (1986):46-58.

<sup>25</sup>Stephen J. Mayer and James S. Russell, "Behavior Modeling Training in Organizations: Concerns and Conclusions," Journal of Management 13 (Spring 1987):21-40.

<sup>26</sup>Jack Zenger, Supervision Program, Videotape, (Cupertino, CA: Zenger Miller, 1981), 10 minutes.

good demonstration or example must be worth ten thousand."

The next key element of behavior modeling is a checklist for understanding. This provides the conceptual framework of what are the necessary checkpoints to be successful, why are each of these checkpoints important and how are they done for optimal results.

Watching someone play a piano and identifying each of the checklist points does not insure that one will be a concert pianist. Practice is an essential key element to skill acquisition. As part of that practice, feedback about the practice is necessary so that the performer knows when they have done well and how their performance could be improved. These four key elements are the main part of behavior modeling.

Front Line Leadership is a program by the Zenger-Miller Company which employs behavior modeling and has two modules which focus on supervisory communication. The two modules are "Getting Good Information from Others" and "Getting Your Ideas Across".

The "Getting Good Information from Others" module focuses on non-verbal communication behavior, active listening and asking open-ended and closed questions. The main theme is skill training to be a good receiver in the communication process.

The "Getting Your Idea Across" module focuses on the message preparation, delivery and managing reactions to the

message. The main theme is skill training to be a good sender in the communication process.

Module delivery to participants typically takes three and a half to four hours. Both modules can be completed in the average training day. A module usually begins with an introduction which includes the purpose of the module and an agenda. It may also include some cue exercises to alert the participant of situations during a supervisory day where the skill being learned would need to be employed.

Next, videotape models are used to demonstrate the key actions. There may be negative models followed by a positive model. The last videotape model is always positive. The model generates discussion about the key actions. The key actions provide a conceptual framework for understanding the skill to be learned. Each key action is discussed in a systematic teaching approach of what each key action is, why it is important to do and strategies of how it can be accomplished. This discussion may or may not be followed by another videotape model.

All the preceding work is preparation for the skills practice to use the key actions. Participants complete a series of planning questions which provide an on-the-job situation where there will be opportunities to practice the key actions. Groups are then formed of two, three or four participants to practice the identified situations each participant has prepared and to use the key actions of the

module under study. Each role play has a key action user, an employee who would act naturally for the given situation and an observer who monitors the time, takes notes of the interaction and guides the feedback session. The feedback session consists of the key action user telling the group which key actions he or she did well and what, if anything, they will do differently the next time they are presented with a similar situation. This role play session debrief continues with the participant who played the employee providing feedback to the key action user, followed by the observer who adds their observation. Each role play and feedback session takes approximately 15 to 20 minutes. Roles are then rotated and another role play begins. The entire practice session is usually completed in a one hour time frame.

At the conclusion of the small group practice session, the large group reconvenes and a large group debrief is undertaken. Learning points are discussed and shared with the group.

Each module concludes with action planning and a coaching discussion. Each participant spends a few minutes recording how, when and with whom they will use this skill on the job. Participants are then paired and discuss personal pitfalls they have discovered in using this skill and how they will overcome them. The notes taken are incorporated in their action log.

As part of the assignment for the next session, each

participant is encouraged to practice this skill. They then report back to their coach the results achieved by using this skill at the start of the next training session.

Another producer of this type of training program is Development Dimensions International located in Pittsburg, Pennsylvania. Both Zenger-Miller and DDI require instructor certification for program delivery. Typical start-up cost, including instructor certification and program material for a group of 20 to 25 supervisors, is approximately \$10,000 to \$15,000.

Another type of communication training used with manufacturing supervisors is Social Style Awareness Training. Some providers of instructor certification and program material are TRACOM Corporation and Mayers and Company, both located in Denver, Colorado and Ridge Consultants located in Cazenovia, New York. This type of training employs survey-feedback. Each participant distributes a survey to five co-workers. The survey uses adjectives to describe social style, is forwarded directly to the provider for scoring and a summary report for each participant is sent to the instructor for use during class sessions. The morning of the first session is used to develop the model in terms of assertiveness and responsiveness. The four social styles of analytical, amiable, expressive and driver are identified. Each participant then receives feedback about their social style. In the afternoon of the first day, the element of



versatility is introduced and participants receive feedback about their versatility. The second day of the session is devoted to style identification of others, back-up styles of each social style, style modification and practicing versatility.

Typical start-up cost, including instructor certification and program materials is approximately \$10,000 to \$15,000 for a group of 20 to 25 participants.

These types of communication training used for supervisors in a manufacturing environment are not meant to be all inclusive. They are meant to be examples of current methodologies and program content used in the industrial setting.

In summary, there is a need for communication training of supervisors in a manufacturing environment. The problem becomes that, due to the complexity of communication, there is confusion on which aspects of communication should be addressed. In a world of limited training resources, where can we best employ those resources in communication training to enhance supervisory effectiveness? This area is in need of further research. Some practical applications of current research were discussed. These applications are used in industrial settings to enhance supervisory effectiveness via improved communications.

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