An exploratory study into the impact of work design on the self-efficacy of workers with low literacy skills

Michael Kenneth Holt

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The Dissertation Committee for Michael Kenneth Holt certifies that this is the final approved version of the following electronic dissertation: “An Exploratory Study Into the Impact of Work Design on the Self-Efficacy of Workers With Low Literacy Skills.”

___________________________________
Robert R. Taylor, Ph.D.
Major Professor

We have read this dissertation and recommend its acceptance:

___________________________________
Carol Danehower, Ph.D.

___________________________________
Coy Jones, Ph.D.

___________________________________
Peter Wright, Ph.D.

Accepted for the Graduate Council:

___________________________________
Karen D. Weddle-West, Ph.D.
Vice Provost for Graduate Programs
AN EXPLORATORY STUDY INTO THE IMPACT OF WORK DESIGN ON THE SELF-EFFICACY OF WORKERS WITH LOW LITERACY SKILLS

by

Michael Kenneth Holt

A Dissertation

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy

Major: Management

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DEDICATION

I am blessed with the most wonderful family that God has ever given to any man. There is not a more supportive mother-in-law in the world than mine, thank you Neanie, for your prayers, encouragement, and willingness to help in every way during this process. To my son, Mitch, and my daughter, Marleigh, I am so proud of you. During the process of my studies and writing, I have lamented every minute that it took away from you and I cherished each minute I spent with you even more. And, to the love of my life, my soul mate, my best friend, Lynn, I do not have the capacity to express how much I appreciate your patience and support through this grueling process. It is to my family that I dedicate this dissertation. I love you and you can take next Monday off.
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As you move through the pages of this dissertation, please know that every worthwhile thought and idea you may find within is a result of the support and guidance of these fine people. Every mistake and flaw you find can be attributed to me.
ABSTRACT


As trends in the labor market indicate growing worker shortages, the problem of incorporating workers with low literacy skills into the workplace becomes more important. There are significant numbers of low literate workers in the labor market who pose hard dollar costs on business and society due to literacy related mistakes.

Organizations have been moving toward more participative work designs in efforts to attract and maintain satisfied and motivated workforces. There are significant skill sets required to become successful team members. Many of these skills are outlined in management literature, but one glaring oversight is dealing with the issue of low literate workers. Little or no theoretical foundation has been established that proposes how to best incorporate low literate workers into organizations.

The purpose of this study was to investigate the design of the workplace to determine if a team oriented work design or a directive management design was more conducive to maintaining self-efficacy beliefs of low literate workers. The study also considered coping styles of low literate workers as a potential moderating influence on the work-design self-efficacy relationship.

Research was conducted on 179 subjects identified through participation in Adult Basic Education courses throughout West Tennessee. Low literate workers could not be given traditional pen and paper surveys so subjects were shown videotaped scenarios that represented the different work designs.
The research showed that low literate workers had higher self-efficacy beliefs in a directive work setting than a participative work setting. Low literate workers also expressed greater preference for the directive setting than the participative setting. Coping strategies were not found to have significant influences on the self-efficacy beliefs. Recommendations are made for methods of including low literate workers in the organization and for additional streams of research that need to be considered.
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Chapter 1: Introduction

Employers are facing a shortage of skilled workers entering the labor markets and workers whose skills have been outdated due to technological advancements. One of the most basic of workplace skills is literacy. It is estimated that 27 million adults are functionally illiterate (Goddard, 1989; Zemke, 1989). If the broader measure of “basic workplace skills” is used as the literacy standard, it is estimated that as many as 41% of the workforce are illiterate (DesLauriers, 1989). Literacy may be especially important as workers become more empowered to work together to reach work decisions on teams.

A great divide exists between theory and practice in relating the theories of team oriented production with the actual skill levels of workers. This gap between theory and practice can be bridged by considering the theoretical and practical ramifications of the existence of low literate workers in the participative workplace.

This study attempts to assess the impact of the design of the work environment on the self-efficacy of low literate workers. Work designs are classified as team oriented or directive to indicate the degree of managerial versus employee control exercised in the task performance. In addition, the influence of low literate workers’ strategies used to cope with a literacy deficiency is explored to determine if there is a difference in how the work design impacts self-efficacy of workers who use different coping strategies. This study proposes to incorporate low literate workers into the full discussion of management theory and to suggest ways that organizations may attempt to deal with existing low literate workers in the workplace.
Chapter 2: Literature Review

Team Oriented and Directive Work Designs

Traditionally, organizations have been organized as directive work environments. Lawler (1992) referred to this design as the “control-oriented approach.” It is a top-down approach where managers make decisions and communicate the instructions for carrying out those decisions to individuals in the lower levels of the organization (Tannenbaum & Schmidt, 1958). The directive work design assumes that hierarchy and vertical relationships are the best ways to assure that work gets done in a productive and high-quality manner (Lawler, 1992).

Directive management has existed for centuries but received theoretical support from Max Weber’s (1947) bureaucratic management and Frederick Taylor’s (1911 & 1915) scientific management theories. The directive approach is based on the idea that the best way to manage the work of low-level organizational participants is to standardize their activities into simple, routine, and repetitive tasks. The workers are told how to perform the tasks and are closely supervised to insure maximum performance. Managers were the only ones who are expected to make decisions, coordinate, and control. Employees are expected to carry out instructions (Lawler, 1992; Wellins, Byham, & Wilson, 1991).

“The assembly line and the concepts of Frederick Winslow Taylor were ready-made for an American work force that was made up of poorly educated immigrants who, in many cases, did not speak English” (Lawler, 1986, p. 6). In fact, directive management could have been called “America’s competitive advantage” during the 1950s and 1960s, when large hierarchies were developed to manage successful corporations such as IBM, Exxon, Kodak, and General Motors (Lawler, 1992).
According to Boyette and Conn (1991), the traditional workplace was designed so that “employees were limited to the performance of a discrete, narrowly defined task and were discouraged and, in some cases even forbidden, to seek knowledge about the whole task, product, or service they were producing” (p. 235). The way mutually interdependent tasks were simplified and organized caused interaction between employees to be limited. As a result, an employee did not have to receive or send information related to the task to other employees.

Henry Ford utilized individual pay systems to help motivate the employees to perform these simple, standardized tasks. He also added staff employees to “be sure that people with appropriate expertise were present to deal with the complex planning and scheduling issues that grew out of high level of specialization” and “layers of hierarchy. . . to control and coordinate the workplace” (Lawler, 1992, p. 26). This allowed the line personnel to focus on the task and not have to deal with managerial issues and decisions.

The directive workplace could be described as the patriarchal contract (Block, 1987). It requires submission to authority which may not be a natural response of American culture. It can be comforting, however, in that “when things go wrong, it is not their [the employees’] fault; and the fact that they pay for this comfort with their own helplessness is a small price to pay” (Block, 1987, p. 26). The high degree of external control adds clarity to the task at hand. “If we want clear structures, if we want clarity and simplicity of goals and purpose, and little disagreement about it, the easiest way to achieve that is through an autocratic high-control way of operating” (Block, 1987, p. 30).

More importantly, the directive workplace removes the necessity that all employees be literate. Employees in this environment are not asked to read, interpret, and
transmit information about their jobs. Managers tell the employees what they need to know, which consists mostly of task related orders. By coordinating all managerial decisions in the higher levels of the organization, employees are not required to have the ability to process more than the simplest information. Those employees who do possess literacy skills are not asked to use them in any meaningful way.

The traditional, directive workplace presented a potential conflict for “mature adults” which would eventually cause defensive behaviors such as withdrawal, apathy, and distrust (Argyris, 1957). The traditional workplace was believed to prohibit individuals from satisfying basic human work needs, such as increased autonomy and meaningfulness, and would result in psychological and even physical injury (Argyris, 1957; Sashkin, 1984). Allowing employees to participate in decision making was viewed as “providing opportunities for people in the modern world to find meaning in their lives” (Pasmore & Fagans, 1992).

The participative approach is not new. It is one of organizational behavior’s oldest areas of inquiry dating as far back as Hugo Munsterberg’s Psychological and Industrial Efficiency written in 1913 (Glew, O’Leary-Kelly, Griffin, & Van Fleet, 1995). Attention has focused more intently on participation since the 1960’s due to a series of changes in the environment and nature of the workplace (Lawler, 1986). American firms found that they were losing productivity and quality advantages to international competitors forcing them to look for ways to adapt to the competitive environment by making their human resources more productive. Participation represented an alternative approach that held the promise of increased productivity.
The types of products produced and technologies used were also changing and shifting production away from blue collar, manufacturing jobs toward service sector, and high tech jobs. This was a movement away from the machine pacing and standardization of the typical directive process to employee control of the production process. This tended not to favor managerial control as much as employee control over task performance (Lawler, 1986).

The changing paradigm of the workplace is participation. Participation can take a number of diverse forms and the effects of participation vary with the form it takes (Cotton, Vollrath, Froggatt, Lengick-Hall, & Jennings, 1988; Glew et al., 1995). There are four common dimensions characteristic of participation: role-expanding behaviors, conscious interaction between individuals, interaction that must be visible to both individuals, and participating actors who generally hold different hierarchical levels (Glew et al., 1995).

The typical participative work design includes flatter organizational structures that utilize more of a team approach. Participants share leadership responsibilities with the manager as information is exchanged freely and vertically in the organizational hierarchy as well as horizontally. Employees go from a more passive role to an active role in the planning, controlling, and coordinating of work. Not only are members now responsible for getting the job done, they are also responsible for managing themselves (Wellins et al., 1991). Boyette and Boyette (1995) term this arrangement “knowledge-intensive units” because knowledge is needed to enact their expanded work behaviors.

As the design of the workplace changes to become more team driven and more management functions are given to employees, they are expected to be able to handle the
resulting increased information flow. Workers are expected to be able to read and write on a level that allows them to read, interpret, and communicate data coming from a variety of sources. The U.S. Department of Labor commissioned an in depth study of the workplace in the Secretary’s Commission on Achieving Necessary Skills (SCANS) report. The report stated that in order to fulfill the demands of the team based workplace “all employees will have to read well enough to understand and interpret diagrams, directories, correspondence, manuals, records, charts, graphs, tables, and specifications” (Boyette & Boyette, 1995. 162). Workers who are unable to perform to the required literacy standards will not be able to “locate the descriptive and quantitative information needed to make decisions or to recommend courses of action” (p. 162).

**Workers’ Literacy Levels**

The focus of this study is on the problem of low literacy. If the nature of the demands placed on workers in the participative environment necessitates literacy, and low literacy is a significant problem in the labor force, then the question of the most appropriate organizational design becomes important. Before this can directly be addressed, a working definition of literacy and therefore low literacy must be adopted.

Literacy is a perplexing concept to define. Harman (1987) suggests, "the attempt to define literacy is like a walk to the horizon: as one walks toward it, it continuously recedes. People considered literate by a previous yardstick are now regarded as illiterate” (p. 3). It is common for “grade level” to be used in measuring literacy. For example, the United States Census uses grade level as the determinant of literacy (Cervero, 1985). There have been many attempts to find an absolute measure for literacy in the same manner in which, for example, body weight is measured. Of these attempts, all have concluded that literacy is more of a relative than an absolute concept (Cervero, 1985;
Freire, 1970; Hunter & Harmon, 1979; Kirsch & Guthrie, 1978; Northcutt et al., 1975; Scribner & Cole, 1978; Sticht, Caylor, Kemp, & Fox, 1972). The set of skills and abilities associated with the "literate" varies across settings and applications making a generalizable definition much more difficult to exact.

There are two interpretations of literacy that have gained wide acceptance:

Conventional literacy: the ability to read, write, and comprehend tests on familiar subjects and to understand whatever signs, labels, instructions, and directions are necessary to get along within one's environment.

Functional literacy: the possession of skills perceived as necessary by particular persons and groups to fulfill their own self determined objectives as family and community members, citizens, consumers, job holders, and members of social, religious, or other associations of their choosing. This includes the ability to read and write adequately to satisfy the requirements they set for themselves as being important for their own lives; the ability to deal positively with demands made on them by society; and the ability to solve the problems they face in their daily lives. (Hunter & Harman, 1979, p. 7)

The concept of functional literacy goes beyond the "three R's" and broadly includes any skills that are required for effective performance in the social arena. In a non-context specific manner, this definition captures the essence of literacy; however, in the realm of the workplace this definition is vague and leaves much for individual interpretation.

In order for employers to confront the skill shortage problem, a more explicit and detailed explanation of the essential workplace skills required for today's environment is needed. The Department of Labor’s SCANS (Secretary’s Commission on Achieving Necessary Skills) report identified the skills that will be required for the workplace in the twenty-first century. The report lists five competencies required for the workplace: resources, the ability to handle resources at their disposal; interpersonal skills, the ability to work well with team members; systems, the ability to understand their own work in the
context of the workplace around them; technology, the ability to select and use technology; and most importantly to this study, information, the ability to acquire and evaluate data (Boyette & Boyette, 1995).

An employee must be able to identify the need for data, obtain the data from existing sources or create it, and evaluate the data’s relevance and accuracy. This might involve developing forms to collect data and researching and collecting data from appropriate sources such as libraries, on-line databases etc. (Boyette & Boyette, 1995).

Workers must also be able to organize and maintain information. Here the employee would organize, process, and maintain written or computerized records in a systematic fashion. This might involve the employee in developing filing systems for record retention, inventory systems, accounts receivable systems etc. (Boyette & Boyette, 1995).

Information collected and retained by employees would have to be interpreted and communicated to other employees using oral, written, graphic, pictorial, or multimedia methods. This includes the ability to produce reports incorporating graphics to interpret and illustrate information, make oral presentations both formally and informally, and develop materials communicating information, such as manuals, for the use of other employees (Boyette & Boyette, 1995).

Glynda Hull (2000) distinguished between basic and complex literacy skills in the workplace. Her concept of basic skills referred to simple self-contained tasks such as copying and labeling. The greater purposes of literacy in the workplace are using literacy to explain, taking part in discourse around texts, participating in the flow of information,
problem solving, and exercising judgment (Hull, 2000; Scholtz & Prisloo, 2001). These latter activities constitute complex literacy in the workplace.

The SCANS report identifies a three-part foundation required by the competencies. This foundation consists of thinking skills, personal qualities, and basic skills. The basic skills include five components. The first component, reading, is described as the ability to locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules. The second component, writing, is the communicating of thoughts, ideas, information, and messages in documents such as letters, directions, manuals, reports, graphs, and flow charts. Arithmetic, the third component, involves the performance of basic computations. Listening ability, the fourth area, is the ability to receive, attend to, interpret, and respond to verbal messages and cues. The ability to communicate ideas orally is the final component (Boyette & Boyette, 1995). There is a current debate centered on when students should master these skills in the education system. The U.S. Department of Labor estimated that by the twenty-first century, most jobs would require at least one year of college education to meet the minimum workplace requirements. According to others, this minimum workplace literacy may be as high as two years of college education (Boyette & Conn, 1991).

Affixing a definition to “illiterate” workers for the purpose of research is problematic. Due to the nature of the measure of literacy, it is difficult to state exactly where literacy ends and illiteracy begins. An absolute measure exists for body weight, as alluded to before, yet an exact cutoff for obesity cannot be offered. The distinction depends on other situational factors such as height, bone structure etc. Illiteracy likewise
cannot be attributed to an exact reading level. It depends on the situation. Perhaps a college instructor would be required to read on the sophomore or junior college level, reading below this level could render him or her functionally illiterate in the setting in which he or she operated. Due to the inexact nature of the term “illiteracy,” the term “low literacy” will be used to designate workers whose skills fall short of the requirements of the workplace.

The absence of any of the three foundational components identified by the SCANS report is detrimental to the demonstration of the five stated competencies. For the purpose of this study, emphasis is placed on low literacy, or the lack of the basic skill of reading. It is certainly possible that individuals who are literate may very well lack other key skills needed to be functional in the workplace. Operationally, literacy level, as indicated by reading level, is one of the simpler concepts to identify and measure and is therefore better suited to empirical analysis.

The Existence of a Low Literacy Dilemma

What is the extent of this literacy problem? Is there a shortage of literate or competent workers? Are there deficiencies in literacy in the workplace? And, if so, what is the full impact of this deficiency on American business organizations?

As much as 23% of the total United States population reads at the lowest levels of literacy (Thompkins & Binder, 2003). According to the Business Council for Effective Literacy (BCEL), 27 million adult Americans are functionally illiterate, and another 45 million are on the border line of functional illiteracy (Goddard, 1989; Zemke, 1989); in other words, 71 million adults are unable to read, write, calculate, or solve problems that would allow them to cope with the simplest technical tasks. The National Alliance of Business estimates costs of the low literacy at $60 billion annually due to lost wages,
profits, and productivity (Hays, 1999) and losses balloon to $225 billion annually if social costs are added (Goddard, 1989; Kozol, 1985; Reese, 1996; Zemke, 1989). In Great Britain it is estimated that seven million adults do not have the literacy skills expected of an 11-year-old and the costs to the economy approach £10 billion annually (Barker, 2003).

The United State Department of Labor estimates that nearly half of the 191 million adults living in the U.S. are functionally illiterate. The Department of Labor includes those who, for example, cannot read a safety manual or complete a benefits selection form as functionally illiterate (Tyler, 1996). The International Adult Literacy Survey found that over 23% of American adults had literacy levels below the level required to fill out job applications (National Center for Policy Analysis, 2001). In Memphis, Tennessee, 33% of adults 16 years of age and older are estimated to read at “level 1 proficiency” as defined by the National Adult Literacy Survey. This compares unfavorably with the state estimate of 21% (Orchik, 2000).

Motorola found that 80% of its entry level applicants failed a test requiring seventh-grade English and fifth-grade math (Boyette & Conn, 1991). Illiteracy of Health Care workers has been identified as a serious threat to the quality of health care worldwide (Talwalker, 2003). Nine out of 10 Fortune 1000 CEO’s list illiteracy as a workplace problem that affects productivity and profitability, 77% say it has affected their own company (Reese, 1996). The United Nations declared this to be the Literacy Decade (2003-2012) to focus on the worldwide problem of illiteracy (International Reading Association, 2003). In his 2001 Presidential Address before the Academy of Management, Dr. Andrew Van de Ven spoke about the problem of illiteracy and
expressed “surprise” that the field of management had paid “little attention to the tremendous disparities in our world” (Van de Ven, 2002, p. 174).

This problem is not limited to entry level, hourly workers. Prudential Insurance Company found that 44% of its job applicants were unemployable because they could not read at the ninth grade level (Boyette & Conn, 1991). The United States Department of Education estimated not only that 30% of skilled and unskilled workers are functionally illiterate, but also 11% of managerial, professional, and technical employees are as well (Goddard, 1989; Zemke, 1989). Jay Thiessens, CEO of B & J Machine Tool Company, built his business into a $5 million-a-year operation while he hid the secret that he could not read (It’s Never Too Late, 1999).

There have been low literate members of society throughout the history of civilization but during most eras it did not pose a serious problem to employers because few workers needed to be literate. Most of the time there has been a pool of literate applicants large enough that employers did not have to accept applicants who were unable to read and write for positions where literacy was required, therefore literacy was not considered a problem. Boyette and Conn (1991) contend that there were jobs available for the workers who lacked literacy skills in the traditional, directive workplace. The jobs may not have been the most desirable, but there were jobs to be had. They suggest that businesses cannot afford to have workers with low levels of literacy in the future.

There are two forces in today's workplace that have eliminated the luxury of ignoring workers with low literacy skills and have forced employers to share in the
responsibility of training deficient workers. The first force is demographic shift; the second is technological advancement (Carnevale, Gainer, & Meltzer, 1991).

The available pool of entry-level employees is shrinking, thus forcing employers to fill vacant positions with marginal employees who would have been passed over in abundant labor markets. The population of entry-level employees was 38.5% of the total population in 1960; that percentage has been falling and is expected to reach 26.3% by the year 2020 (Carnevale et al., 1991).

Meanwhile, technology is changing at such a dramatic rate that workers who were adequately equipped for the workplace five years ago may now be inadequate. The deficiency is not due to a “dumbing down” of existing workers, it is a result of the dramatic increase of technology used in all sectors of the economy (1999 AMA survey, 1999). The average plant worker has been out of high school for over 20 years and was most likely a marginal student then, yet is now expected to stay abreast of technological changes to maintain his or her skill level (Jurmo, Wiggenhorn, Packer, & Zeigler, 1989). Rear Admiral Clinton W. Taylor reported that the literacy level of Naval recruits was so low that many did not have the ability to learn and employ the critical information necessary to function in the modern, high-tech Navy (Zemke, 1989).

A Fortune 500 survey reported that half of the companies found it difficult to hire employees with good basic skills. Motorola estimated that half of its existing factory workers needed remedial education to attain seventh grade math and English skills (Bergstrom, 1990); and the Navy termed 30% of its recruits as dangers to themselves and to the costly naval equipment (Kozol, 1985).
The experience is similar in Canada. A Conference Board of Canada survey found that one out of three Canadian businesses reported serious difficulties introducing new technology, maintaining or improving product quality, and meeting productivity standards because of skill deficiencies in the labor force (Benton & Noyelle, 1992). Figures on literacy indicate up to 40% of Canadian workers are “reading deficit,” that is they may be able to make out words but they have difficulty grasping the meaning of sentences (Dehaas, 1999).

The workplace is increasingly finding younger workers with inadequate skills and older workers with outdated skills (Goldstein, 1988). Research conducted for the Workforce 2000 project (Johnston & Packer, 1987; Packer, 1993) found a sizeable gap between actual skill levels possessed by young adults entering the labor market in 1985 and the requirements of the labor market between 1985 and 2000. The study showed that 24% of the jobs created in 1985 required skills in the upper half of the skills range as defined by the Department of Labor’s Dictionary of Occupational Titles. Forty-one percent of the net new jobs will require skills in the upper level. There are only 6% of the young adults entering the labor force who have skills in this same upper level. At the same time 78% of the entering workers have skills that fall in the lowest two levels while only 25% of the net new jobs will only require these skills. There is a shortage of skilled workers and there is an abundance of skill deficient workers who will compete for fewer low skilled jobs. The skill deficiency problem will constrain the economic growth of the nation if not resolved (Packer, 1993).

The field of management is replete with research and articles heralding the benefits of adopting participative and team designs in the workplace (Benveniste, 1994;

**Treatment of Low Literate Workers in Management Literature**

Sashkin (1984) suggests that participative work designs will have a “positive effect on performance, productivity, and employee satisfaction because it [the participative design] fulfills the three basic human work needs: increased autonomy, increased meaningfulness, and decreased isolation” (p. 11). According to Pasmore and Fagans (1992), Argyris “views participation as a means of helping individuals to become more active, more independent, and more equal” (p. 386). Is this true for all workers? Will everyone benefit equally from participation in a team-oriented environment?

The most common assumption made in this literature is that there is an abundant supply of workers who possess the necessary “skills” to successfully perform on teams. This is evident by lack of discussion of the difficulties in finding skilled workers. Among those who do address the problem of finding workers with the requisite skills, teams are touted as a way to “attract and retain the best people” (Wellins et al., 1991) in the face of shortages of workers who possess adequate skills. It is also suggested that skills could be developed by reading books and journals and taking courses to stay current in their fields (Tjosvold & Tjosvold, 1991), an option not available to low literate employees.

Most of the major models of team-building and participation (Gladstein, 1984; Hackman, 1983, 1990; Kinlaw, 1991; Kolodny & Kiggundu, 1980; Larson & LaFasto, 1989; Steiner, 1972; Tjosvold, 1986) have in some fashion included "skills" or "competence" in the framework leading to group effectiveness. None of the models have provided the depth of analysis warranted by the significance of the low literacy problem.
The models can be divided according to their treatment of “skills” in the theoretical construct. One group views skills as an input to the group process (Gladstein, 1984; Kolodny & Kiggundu, 1980; Steiner, 1972). The second group views skills as an existing condition sufficient for the operationalization of the models (Hackman, 1983, 1990; Kinlaw, 1991; Larson & LaFasto, 1989; Tjosvold, 1986). The first group does explicitly address the issue of skills of the workforce, but then they proceed to assume that there will be skilled workers available for hire and do not address the possibility, or likelihood, that there will be low literate workers on work teams. The second group tends to assume that organizations would not have low literate workers. The authors may mention skills in describing the nature of the worker who will be on the teams but the models make no mention of team members who lack basic skills.

Glew et al., (1995) present a “framework of the participation process” (Figure 1) for use in “advancing our knowledge of participation” (p. 397). The process begins with the organization perceiving some benefit to be gained from adopting a form of participation and then launching an intended program of participation. As a result of the individual and organizational factors that impact the workplace, the actual participation program may turn out to be different from the intended program. The actual program will lead to individual and organizational outcomes that again may or may not be the intended outcomes from the inception (Glew et al., 1995).

Glew et al., (1995) then suggest that the majority of research on participation has centered on the final two stages of the participation process (the actual program and the outcomes). They call for research to investigate the relationships that exist earlier in the process.
Of relevance to the study at hand, skills and abilities represent individual factors that may influence the participation outcome. Locke and Schweiger (1979) were among the earliest to suggest that skill levels are moderating influences on participation outcomes. They suggested that employees with greater knowledge should have greater performance gains from participation than employees with lesser knowledge. Steel & Mento (1987) were unable to find support for this contention but suggested that competence acted as an uncontrolled confounding variable.

Vroom (1960) suggests that participation is more apt to be successful when combined with programs designed to increase participants’ skills and abilities. Dachler and Wilpert (1978) contend that there is evidence to support concerns over the ability of individuals to engage in participative efforts and suggest that the research is still lacking.

Pasmore and Fagans (1992) state:
One shortcoming of the research on participation not mentioned . . . is that there have been no measures of the readiness of employees to engage in participatory activities. Although we would not expect excellent performance in a technical task without adequate training and preparation for employees, there appears to be an assumption that all employees are naturally prepared and ready to participate given the opportunity. In fact, we believe that a lack of training, preparation, and readiness may severely limit the positive effects that participative interventions might otherwise have. (p. 381)

It is not clear from the references made to “skills and abilities” if they refer to the “skills and abilities required to participate” such as people skills or if they mean the basic skills the worker brings to the job. There is no mention of literacy. One would be inclined to classify the “skills and abilities” from the sources listed above as relating to the task of participating.

The dilemma that exists is between a reality of the labor market in which there is a shortage of literate workers, and the "constructed reality" of the theories that presume the existence of literate workers to carry out the self-management functions required in a participative setting. None of the existing models adequately reflect the possibility that not all team members are literate despite the fact that there are low literate workers who are currently, and who will be, working in the empowered workplace. Even those theorists and researchers who explicitly call for consideration of skills or competence stop short of explicitly addressing the special condition of low literate workers in the participative intervention.

Given that the lack of full literacy will be a problem for both the organization and the low literate employees themselves, the question still remains concerning what are the full effects of low literacy in the workplace. Obviously the literacy weakness itself is a barrier to successful employment, and possibly more so in a team-oriented environment, but what are some of the other psychological and behavioral consequences of low
literacy? The present study examines the psychological effect that low literacy has on employees’ self-efficacy and further examines the behavioral tendency to want to engage in jobs of a certain kind. First, self-efficacy will be examined and its relationship to literacy explored.

**Self-Efficacy**

Self-efficacy is defined as “people’s beliefs in their capabilities to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over events in their lives” (Wood & Bandura, 1989, p. 364). Self-efficacy has a generative capacity through which an individual organizes the skills he or she possesses into a course of action (Bandura, 1982). There is much research evidence documenting the positive relationship between self-efficacy and task performance in a wide variety of work related settings (e.g., Bandura, 1982; Bandura & Adams, 1977; Bandura, Adams, & Beyer, 1977; Bandura, Adams, Hardy, & Howell, 1980; Barling & Beattie, 1983; Gist, 1987; Gist, 1989; Stumpf, Brief, Hartman, 1987; Taylor, Locke, Lee, & Gist, 1984). In addition to its ability to influence performance, self-efficacy also influences the choices one makes, the goals set, the effort rendered, and the persistence demonstrated in the pursuit of difficulties (Bandura, 1991; Gist & Mitchell, 1992; Lent, Brown & Larkin, 1987; Locke, Frederick, Lee, & Bobko, 1984; Stumpf, Brief, & Hartman, 1987; Taylor et al., 1984). The primary focus in this study is the self-efficacy of low literate workers and the impact work design may have on efficacy beliefs.

It has been suggested that low self-efficacy can result in reduced ability to recognize opportunities and reduced motivation (Abramson, Seligman, & Teasdale, 1978). Low efficacy beliefs can also lead to avoidance behaviors that shield workers from confronting situations that are perceived as exceeding their ability to cope (Bandura,
Workers with greater self-efficacy will approach, explore, and deal with new and threatening situations that act as barriers for workers with low levels of self-efficacy (Bandura, 1977a; Thomas & Velthouse, 1990).

Self-efficacy has often been confused with self-esteem. While the two concepts are similar there are important differences. Self-esteem refers to affective evaluation of the self, for example, feelings of self-worth, liking one’s self. Self-efficacy is a judgement about one’s capability to perform a task (Gist & Mitchell, 1992). As a result, self-efficacy is more situation specific and self-esteem is a global construct that is based on a wide variety of situations (Brockner, 1988). Self-esteem and self-efficacy would be expected to be highly related. An individual with high self-esteem would be expected to view his or her capability of performing a task greater than a low self-esteem individual (Brockner, 1988). It is, nevertheless, possible to think of individuals who have greater self-efficacy for task performance but do not like themselves in general (Brockner, 1988). Bandura (1977a) suggests that self-efficacy is the more appropriate construct when performance in a particular area of functioning is in question because self-esteem is more of a conglomerate index. Because self-efficacy has been found to affect work related behavior in a variety of contexts, and because it is more specific than self-esteem, it seems appropriate to study self-efficacy as it relates to the behavior of low literate individuals in the workforce.

Sources of efficacy beliefs. There are four ways that self-efficacy beliefs are instilled into an individual (Bandura, 1977b, 1982; Wood & Bandura, 1989). The sources of self-efficacy are mastery experiences or enactive mastery, modeling or vicarious experience, social persuasion or verbal suasion, and physiological or emotional arousal.
Of all the sources that instill efficacy beliefs, performance accomplishments provide the most dependable and strongest foundation of efficacy (Bandura 1977a, 1977b, 1982; Bandura et al., 1977). Bandura (1991) states that an individual must pay attention to his or her past performance and the outcomes of that performance to be able to influence his or her motivation and action in the future. Successful performance is positively related to self-efficacy, and unsuccessful performance is negatively related to self-efficacy (Bandura, 1982; Gist, 1987; Gottman & McFall, 1972).

Failed attempts that occur early in the course of events tend to have particularly harmful effects on efficacy, especially if the failure is not related to lack of effort (Bandura, 1982). When individuals have given their best effort and fail, the impact on self-efficacy is greater than when the individuals have given less than their best effort and fail. The fact that some cases of low literacy appear to have been caused by forms of dyslexia (Coltheart, Patterson, & Marshall, 1980; Johnston, 1985) would lend support to the contention that low literate adults would be expected to have lower efficacy because of repeated attempts at reading as children that were unsuccessful not as a result of lack of effort. Low literate adults who have had external factors, such as undiagnosed dyslexia, have worked as hard as they could to read and still have found their attempts futile. This type of failure is more detrimental to self-efficacy than when the failure is due to lack of effort.

Studies that have investigated the effects of failure on subsequent efficacy perceptions have generally found that failure does cause reduced efficacy. Campbell and Hackett (1986) found that undergraduate subjects’ success at performing mathematical and verbal tasks increased self-efficacy expectations, while failure at the tasks caused a
decline in both strength and magnitude of efficacy. Hackett and Betz (1984) also looked at efficacy beliefs and performance on math and verbal tasks and found that failures did have an effect on efficacy, but not always in the expected direction. This is explained by the way people interpret their failures. Those subjects who already possess high efficacy beliefs tend to interpret failure as a result of lack of effort or due to some uncontrollable external factor. Those with lower efficacy attribute their failures more to lack of ability (Gist & Mitchell, 1992).

Low literate workers have experienced failure in attempts to read since childhood. By the time they are adults they are resigned to the fact that they cannot read. As a result of the past failures, they have reduced efficacious beliefs about any tasks that involve reading. These low literate adults will tend to associate their failures in other related areas to their inability to read. Contrast this to literate adults who would attribute failures to external factors rather than low literacy. The literate adults who had not experienced failures of this type in the past would not associate a misinterpreted written instruction as low literacy. Therefore, the literate adult’s reading efficacy would not be diminished due to the inability to read a passage correctly; the low literate adult’s would.

Vicarious experience is another source of self-efficacy that is considered the second strongest influence on self-perception (Bandura 1977b, 1982). Subjects witness the performance of others rather than actually engaging in the performance themselves as in enactive mastery. Research indicates that subjects will experience more of an increase in efficacy beliefs when they see the performance of other similar models rather than adept models (Bandura 1977b). There is also evidence; however, that subjects may experience a decrease in efficacious perception after watching a “perfect group” perform
(Gist, 1987). In this case, the subjects may feel overwhelmed and intimidated believing that they do not possess the requisite skills to allow them to perform at an equivalent level. It was found that modeling is more effective if the models succeeded after overcoming difficulties than when their performance is facile (Bandura et al., 1980). For example, as a child with reading difficulties witnesses peers reading with little observable effort, it may cause the challenged student’s efficacy beliefs to decline.

Verbal suasion is not viewed as being as effective as either modeling or mastery experiences. It is aimed at convincing a person that he or she is capable of performing a task (Gist, 1987). Attempts to convince someone of his or her abilities through verbal suasion is akin to the Pygmalion effect where a person of significant influence holds positive expectations of the performance of another. The impact of these positive expectations on the self-efficacy of the individual depends on the credibility and expertness of the source, a consensus among multiple sources, and the familiarity of the source with performance demands of the task (Gist, 1987). Research suggests that the effects of social persuasion are weak, short-lived, and easily assuaged by unsuccessful experiences (Bandura, 1977b).

The fourth source suggested by Bandura (1977b, 1982) is emotional arousal. The state of emotional and physiological arousal is relied upon in judging anxiety and vulnerability to stress. Individuals will tend to have more successful performances when they are in a relaxed state than when they are tense, nervous, and emotionally aroused. The greater the arousal the more likely the subject is to fail at task performance (Bandura, 1977b; Gist, 1987).
Internal and external influences. Self-efficacy can be influenced by internal or self-generated sources and external or situational sources (Bandura, 1991). Gist and Mitchell (1992) define the internal sources to include knowledge, skills and abilities, performance related strategies, personality factors, and mood states. The external sources include task attributes (task difficulty, complexity, uncertainty, amount of risk or danger etc.), distractions, and normative information (social persuasion, vicarious experience). Other situational factors that serve as external sources of efficacious information such as teacher teaching style, equipment availability, and time constraints have been suggested in experimental research designs investigating the effectiveness of training methods (Mathieu, Martineau, & Tannenbaum, 1993). Some of these factors can be changed; some are more resistant to change. Of those that can be changed, some may be controlled by the individual, some by the organization, some by the manager, and some may be uncontrollable (Gist & Mitchell, 1992).

Situational factors have the power to undermine self-efficacy beliefs and cause feelings of inadequacy that are unwarranted (Bandura, 1982). When individuals focus on the formidable aspects of task performance, their resulting efficacy beliefs are lower than when they focus on what is familiar and within their known capacity (Bandura, 1982; Gist & Mitchell, 1992; Langer, 1979; Mathieu et al., 1993).

The mere presence of a highly efficacious person can lower the efficacy of those around him or her (Langer, 1979). Low literate adults working in a participative setting are surrounded by workers who are literate and confident in their ability to process information. The presence of these literate workers could heighten the inefficacious beliefs of the low literate workers. Low literate workers would become more aware of
their own inadequacies and anxious at the idea of having their inability to read exposed. This emotional arousal tends to inflict additional downward pressure on the low literate workers’ self-efficacy beliefs. This process may be a part of the downward spiral of self-efficacy that may ultimately result in cessation of effort (Lindsley, Brass, & Thomas, 1995).

It is seemingly impossible to capture all of the factors that influence a person’s self-efficacy. Gist and Mitchell (1992) suggest that individuals go through a self-appraisal process that assesses various sources of information to form self-efficacy but this appraisal may utilize different information across distinct realms of operation and situations. Bandura (1991) further posits “individuals attend selectively to certain aspects of their functioning and ignore those that are of little import to them” (p. 250). “The more relevant performances are to one’s value preferences and sense of personal adequacy, the more likely self-evaluative reactions are to be elicited in that activity” (p. 255).

Schaubhoeck and Merritt (1997) measured blood pressure levels of subjects to determine the relationship between job control, coping and self-efficacy. Of particular interest was their finding that “people who are not confident in their mastery over job content may be distressed by the greater responsibility for dealing with demands that stems from control” (p.751).

The emerging theme here is that a low literate worker would be particularly sensitive to those information sources that pertain to his or her inability to read. The participative work setting would expose the low literate worker to interaction with more literate workers who by their mere presence may have a dampening effect on the low literate worker’s self-efficacy. Task performance in the participative setting may require
the worker to process more written information in a public arena than would be required in the directive setting. The low literate worker, who may be capable of performing many of the non-information processing aspects of the job, is likely to focus on the formidable tasks, i.e., reading, and have perceptions of lowered task efficacy.

The directive setting may remove these detrimental stimuli by eliminating the low literate worker’s requirement to read in a social setting. The manager will handle the information processing responsibilities and make decisions and presentations to relieve the low literate worker from such managerial tasks. The interaction among employees involving literacy skills is greatly reduced, which makes comparisons of ability less frequent. As a result, the negative impact of these stimuli is removed, which should leave the low literate employee’s task self-efficacy intact.

**Coping Strategies of Low Literate Adults**

Functioning in a world where literacy is assumed can be a stressful, trying experience. These comments suggest the depth of anguish low literate adults experience:

Go into a restaurant and ask a waitress to read the menu to you. That will give you some idea. But you can never feel the frustration, the anxiety.

I was so ashamed. I couldn’t read and I couldn’t spell.

All the people I’ve let down. Its just one lie after another.

Both my children know I don’t read or write. They know I’m a dummy.

If any promotions come up in the factory, you just give your notice and the boss wonders why you left. (Perrin, 1990, p. 2)

Low literate adults are characterized by feelings of powerlessness and imperfection. They feel they are disadvantaged with respect to certain benefits of society (Hunter & Harman, 1979). They develop defensive strategies to protect themselves
against the stigma attached to low literacy as well as strategies to cope with the stress created from situations requiring skills and abilities they may not have.

The range of coping behaviors which may be exhibited by low literate workers has not been identified in empirical research. However, insight into what these behaviors are and when they might be used is provided by an examination of literature on coping with discriminable stigma, inefficacious beliefs, and work stress.

**Coping with the stigma of low literacy.** Goffman (1963) defines “stigma” as “the situation of an individual who is disqualified from full social acceptance” (p. 5). Spicker (1984) adds that, “stigma has been identified with loss of dignity, ill-treatment, deterrence, the denial of citizenship, shame, embarrassment, disadvantage, an imputation of failure or inadequacy, the reluctance to claim benefits, labeling, and feelings of inferiority” (p. 61).

Low literate adults have been depicted as unproductive, stupid, chronic failures, socially dependent, and morally deficient by society (Beder, 1991; Quigley, 1990); a belief that has been perpetuated by the popular press (Ehringhaus, 1990). Low literates tend to be members of the black, Hispanic, and lower income segments of the population who themselves tend to be stigmatized. As a result, low literate adults are doubly stigmatized. The fact that those of deficient literacy skills are stigmatized is one of the most influential factors in the adult literacy system (Beder, 1991).

Goffman (1963) identified two types of social stigmata, the discredited and the discreditable. Discredited stigmata are marked by overt attributes, such as physical deformities, that cannot be easily hidden. Discreditable stigmata allow for the “marking
attribute” to be hidden so the stigma applies only when the attribute is revealed. Low literacy is a discreditable stigma (Beder, 1991).

There are two strategies typically used in coping with a discreditable stigma and therefore low literacy: passing and covering. The passing strategy involves attempting to avoid exposing the stigma altogether, for example, by pretending to be literate and avoiding situations where illiteracy could be exposed. The covering strategy involves the low literate adult in accepting the stigmatizing attribute but taking steps to avoid the negative consequences (Beder, 1991; Goffman, 1963), for example, by telling a work associate about the problem and using them to help control situations where reading or writing is required.

To pass as literate, low literate workers must conceal their literacy deficiency. They "lie low" and watch for "traps" as a matter of "survival," pretending to read in social situations (Kozol, 1985). This may lead to avoidance behaviors such as choosing isolated work stations and working night shifts to reduce the instances in which literacy skills may be called into question (Supervisory Management, 1989). These actions allow them to achieve personal and work related goals (Hunter & Harman, 1979) but passing is not void of consequence. Low literate adults who are engaging in the passing strategy are not likely to enroll in literacy programs because it requires public disclosure. Because supervisors and others who oversee low literate adults are unaware of the problem due to passing, they are not able to help those in need to take advantage of the programs there to assist them. Finally, low literate adults face the continuous fear of discovery when they are attempting to hide their situation (Beder, 1991).
A covering strategy would not cause low literate workers to completely avoid all situations where literacy is required, but they will attempt to avoid the negative outcomes. They would not necessarily be absent when a particular memo is discussed (such as the passing strategy might suggest), although they would attempt to prevent their level of literacy from being discovered by just anyone. They may choose to reveal their stigma to a small, trusted, inner circle of friends who form a network to assist them in assimilating information presented in written form. As a result, low literate workers who use covering are shielded from exposure but are also socially isolated from the other workers outside the inner circle of trusted allies (Beder, 1991; Fingeret, 1983; Spicker, 1984).

These two forms of coping with the stigma of illiteracy are neither mutually exclusive nor clearly demarcated from one another. There may be situations where a low literate worker chooses to employ the passing strategy and others where he or she chooses to employ the covering strategy. Likewise, there may be situations where one can only pass or can only cover.

It may be that the true distinction between these two reported strategies is in the perception of the low literate worker. If low literate worker is attempting to avoid the situation, that would be passing. If the low literate worker is not avoiding the situation but is attempting to prevent a negative reaction from the situation, that would be covering. Behavioral manifestations of the strategies may quite likely appear to be the same in some instances. If a worker says he or she cannot read a memo because he or she forgot to wear his or her glasses, is that covering or passing? If the same worker listens to
the comments of others in the room and then makes a comment related to those he or she has heard, is the passing or covering strategy employed?

While the exact delineation of the two strategies is not clear, it is evident that low literate workers have the need for defensive coping strategies in dealing with the stigma of low literacy. To further explore these coping phenomena an investigation into coping with inefficacious beliefs and stress is required.

**Coping with inefficacious beliefs.** Bandura (1982) discussed at length how people experience “high anticipatory and performance distress on tasks in which they perceive themselves to be inefficacious, but as the strength of their self-judged efficacy increases, their fear arousal declines” (p. 137). This fear arousal stems from the perceived coping inefficacy. Research on phobics found that the less efficacious subjects judge themselves to be, the more they fear the experience (Bandura, 1982). The fear of the threatening situations heightens their physiological arousal and may further reduce feelings of efficacy (Bandura, 1977b; Gist, 1987).

As an individual is unable to influence the events and social conditions that affect his or her performance and life, feelings of despondency, anxiety, and futility emerge. These distressing events contain two arousal components, one produced by the noxious stimuli and one produced by anticipatory thought. Of the two, the anticipation of the fearful event accounts for more of the stress. The dreadful contemplation causes one to focus thought and energy on the inefficacious aspects of the task and the negative outcomes that magnify the likelihood of failure (Bandura, 1982; Krueger & Dickson, 1994).
People will not attempt tasks they doubt they will be able to perform as they seek courses of action that lead to positive self-reactions and seek to avoid those that lead to negative self-reactions (Bandura 1977a; 1982; 1991). Even when an individual knows that a given alternative is better, if he or she has low self-efficacy beliefs regarding that task, he or she will select a course of action that can be handled or managed rather than the one that is thought better (Ellen, Bearden, & Sharma, 1991; Seltzer, 1983). The function of anticipatory thought is to provide protection against perceived hazards (Bandura, 1977b).

The purpose of steering to courses of action that can be managed or handled is that the control reduces uncertainty and increases predictability (Bandura, 1982). The control can come from either behavioral, cognitive sources, or both. With behavioral control, steps are taken to manage the aversive situation. Behavioral control attempts to make the stressful situation more predictable and thus reduces uncertainty. Cognitive control is the belief that anticipatory threats can be managed once they arrive. Much of the stress associated with an aversive situation comes from the anticipatory thought of the potential outcomes. People with low coping efficacy tend to focus on the severity of possible threats and worry about perils that may never occur. Cognitive control deals with the anticipatory stress (Averill, 1973; Bandura, 1982; Lazarus, 1980; Miller, 1979).

A form of behavioral control is proxy control. Security is sought by giving control to others rather than attempting to cope themselves. The subject views his or her coping efficacy as low so preference is given to dependence on the protection of someone else (Bandura, 1982; Miller, 1980). The person or persons to whom proxy has been given may be able to achieve efficacy increases by providing “instruction, modeling, guided practice
with corrective feedback, and help in transferring new skills to everyday situations” (Wood & Bandura, 1989, p. 364). As will be shown below, some low literate workers utilize a form of proxy control in dealing with workplace literacy requirements.

**Coping with work stress.** Review of the stress literature indicates agreement with the behavioral and cognitive coping sources and goes on to further divide coping strategies into control and escape behaviors based on research across different stressful situations (Latack, 1986; Leiter, 1991). Each of the coping behaviors, control and escape, contain a behavioral and a cognitive element. Control and escape, however represent more situation specific, problem based strategies used to handle aversive events. Control coping consists of “actions and cognitive reappraisals that are proactive, take charge in tone” (Leiter, 1991, p. 378) such as, working harder to meet the challenge. Escape coping consists of “actions and cognitive appraisals that suggest an escapist, avoidance mode” (Leiter, 1991, p. 378), such as, leaving early to avoid a meeting where reading might be required.

Control and escape coping strategies both contain cognitive and behavioral components. Cognitive and behavioral strategies often are overlapping with one complementing the other. Control coping contains cognitive elements such as “Try to think of myself as a winner” and behavioral elements such as “Talk with other people who are involved” (Latack, 1986; Leiter, 1991). The escapist coping contains cognitive elements such as “Remind myself that work isn’t everything” and behavioral elements such as “Avoid being in the situation if I can” (Latack, 1986; Leiter, 1991).

The stress coping nomenclature may also apply to coping behavior utilized by low literate workers to deal with their literacy deficiencies. Low literate workers will engage
in either control or escapist behaviors when they encounter noxious stimuli in the workplace. For example, the control behavior may include disclosing one’s literacy level to trusted allies prior to a stressful encounter. Then, when an interoffice memorandum is distributed, the low literate worker may pretend to know what it says and may even actively discuss what it says by playing off his or her confidants’ leading statements. This worker is employing a control coping behavior. It is possible that in the directive environment, the low literate employee confides his or her situation to the manager. In this case, the manager may provide the low literate worker with verbal instructions rather than written. This is similar to what Bandura (1982) called proxy control for dealing with situations where feelings of low self-efficacy are aroused. In the participative setting, the low literate worker may disclose his or her reading difficulties to teammates. The teammates may aid the low literate worker by reading, or discussing aloud those written messages team members need to know. This allows the low literate worker to grasp at least a portion of the written information and be able to “survive” the situation.

Yet another worker may seek to conceal his or her low literacy by working night shifts to reduce interaction with supervisors and other workers or by choosing isolated work stations. This worker is employing an escapist coping behavior in avoiding exposing his or her literacy skills in front of literate co-workers or supervisors. This strategy may be more successful in the directive setting than the participative setting because situations requiring literacy skills will be more numerous in the participative setting. Occasional escape behavior may succeed in avoiding the stressful situation, but as a long term repeated coping strategy, escape is not a viable stress relieving strategy (Leiter, 1991).
This study uses the control coping strategy and escape coping strategy as independent variables that potentially influence task self-efficacy in the work settings. These two strategies represent specific, problem based approaches to dealing with the stress caused by aversive events, such as being required to be able to read and write in a work setting but not having the skills to do so. Passing and covering designations are not used because they are more indefinite constructs. Control and escape behaviors are better defined and better suited to empirical investigation.

**Hypotheses**

A simple model (see figure 2) is proposed to describe the impact work design has on the self-efficacy of low literate workers. In this model, work is designed as team-based or directive. The suggested influence of coping strategy is indicated as intervening in the relationship between work design and self-efficacy of low literate workers. The relationships suggested by this model are investigated by showing video taped scenarios that depict the team-based and directive work designs to a sample of low literate workers.

![Figure 2. Impact of work design and coping strategies on the self-efficacy of low-literate workers.](image)
The team scenario depicts the employees in self-management functions. The organizational structure is flatter and teams are utilized in the production process. Information is shared with employees to allow them to gather and interpret data necessary to make decisions. As a result, one critical requirement is literacy.

The directive scenario depicts the traditional organizational structure. Managers fulfill the coordination tasks, handle information flow, make decisions, and clarify and simplify the tasks at hand. In performing these tasks, managers shield low literate workers in that the reading requirement is removed, or at least lessened. As a result, efficacy beliefs will not be reduced as much by the fear arousal component of the anticipated task under the directive setting.

It is expected that low literate workers who view the team-based work video will have greater fear arousal than their counterparts who view the directive work video. This fear is created by the literacy requirements implied in the team-based setting. Viewing “team members” discussing reports and memorandums, reading charts etc., will arouse low literate workers’ feelings of inadequacy and low self-efficacy and lead to stressful anticipatory thoughts of potential negative outcomes.

The directive work design does not cause the same degree of fear arousal. The literacy requirement is lessened because managers bear much of the responsibility for the workers. As a result, low literacy workers will not have the same feelings of inadequacy and inefficacy and will not have as much stress caused by anticipatory thoughts.

The work design impacts the task self-efficacy through the literacy component. Low literate workers will experience lower self-efficacy when faced with a potential job in a team-based setting because it requires them to confront a task they believe
themselves incapable of performing. The “anticipation” of the confrontation with written data serves to dampen efficacy beliefs. It may be a task that low literate workers are capable of performing, but the inclusion of the expectation that they must read and interact with literate employees will cause them to focus on that portion of the task with which they are most uncomfortable.

The fact that this task is performed in a group setting may further reduce efficacy beliefs. The fear of exposure is considerable among many low literate workers. Being surrounded by co-workers who are literate may magnify the dilemma. In the directive scenario, fear of exposure may be considerably less so efficacy beliefs would be higher.

As a result, Hypothesis 1a for the study is as follows: The task self-efficacy of low literate subjects will be lower for the team scenario than for the directive scenario.

Low literate workers, whose self-efficacy is low for reading related tasks, will tend to focus on the formidable aspects of jobs that require literacy skills. The team-based setting will involve the low literate worker in more situations where literacy is required and in situations where interaction with literate employees is more frequent. As a result, the low literate worker will be expected to have a preference for the directive work setting where literacy requirements are not as great. Therefore, Hypothesis 1b is as follows: Low literate subjects will express a greater preference for the directive work environment than for the team-based work environment.

Literate workers will not be intimidated by the literacy requirements of the team-based work environment. Instead, they would be expected to focus on the positive outcomes that are associated with participation such as increased autonomy, meaningfulness of work, and responsibility (Pasmore & Fagans, 1992; Sashkin, 1984).
As a result, literate workers would be expected to prefer work environments where they are challenged to use their abilities. Therefore, Hypothesis 2a predicts that task self-efficacy of literate workers will be greater for the team-based scenario than for the directive scenario, and Hypothesis 2b predicts that literate subjects will express a greater preference for the team-based work environment than for the directive work environment.

The coping strategy employed by low literate workers to handle the negative stigma attached to low literacy is expected to influence the relationship between work design and self-efficacy. There are two coping behaviors: control and escape. Escape coping may, for example, involve the avoidance of stigmal consequences by eluding situations where the stigma might be discovered. It is, in essence, hiding. Some low literate workers typically choose this method of dealing with their lack of literacy.

Control coping may, for example, involve the use of an ally or allies who work to help the low literate worker conceal his or her low literacy. Many other low literate workers typically choose this method of coping. Under escape the low literate worker works alone, seeking isolation. Control may be accomplished through close alignment with one or more co-workers and involves disclosure.

Leiter (1991) suggests that escapist coping is a less effective strategy than control coping at reducing stress. It may be that with escapist coping a worker is avoiding the situation and never learns to handle the situation. As a result, the worker will not develop efficacious beliefs in his or her coping abilities. Therefore, as repeated distressful situations are encountered, the worker who continually uses escapist behaviors will continue to have heightened inefficacious beliefs. The worker, however, who has successfully used control behaviors, will gain confidence in his or her ability to handle
the situation and will have lessened anxieties as new situations are encountered. As a result, Hypothesis 3a predicts that low literate subjects who cope by control will have greater task self-efficacy than those who cope by escape.

The team-based work design lends itself better to the control strategy of coping than to the escape strategy. It may very well be that in the directive setting, low literate workers who cope by control may still have greater self-efficacy than workers who cope by escape. It is also likely that these workers who cope by control will find the team-based setting less threatening than the low literate workers who employ escape coping behaviors. Those who use control may disclose their literacy dilemma with others and therefore be more accustomed to working with a group. Seeing the team-based scenario will cause anxiety, however those workers who have used networks to cope will not be as distressed because they will have had some success at working with a group before. This partial degree of success may provide some stability in the self-efficacy belief.

Hypothesis 3b is as follows: The task self-efficacy of low literate workers who cope by control will be greater than the task self-efficacy of low literate workers who cope by escape for the team-based work scenario.

The directive work design should not prove to dampen efficacious beliefs as much as the team-based work design as discussed above. The need for coping behavior may be lessened in the directive environment because the literacy demand on employees is diminished. Nevertheless, it would also be expected that even in the directive environment, control coping strategy is more effective than escape. Therefore Hypothesis 3c predicts that the task self-efficacy of low literate workers who cope by control will be greater than the task self-efficacy of low literate workers who cope by escape for the
directive work scenario. Hypothesis 3d predicts that the difference between the task self-efficacy of low literate workers who cope by control instead of escape will be greater for the team-based work scenario than for the directive work scenario.

It is expected that the literate workers, who have no reason to fear reading and writing in a group setting, will have greater task self-efficacy when facing a team-based work design than the low literate workers facing the same work design. Low literate workers, although some will better adapt than others, will tend to prefer situations where exposing their literacy skills are avoided. The prospect of working in a new team will create heightened anxiety and cause the self-efficacy of the low literate workers to decline. Therefore, Hypothesis 4a is as follows: The task self-efficacy of literate workers will be greater than low literate subjects for the team-based work scenario.

The relationship between the efficacy beliefs of literate and low literate workers facing the directive work design is less clear. It is believed that low literate workers will sense less cause for alarm in the directive setting since they will have less likelihood of being exposed in a public arena (i.e., the team). As a result, it is not expected that the directive work design will weaken self-efficacy of low literate workers as is expected in the team-based design. There is no indication that the directive work setting would reduce the efficacy beliefs of literate workers. Any difference between the self-efficacy of low literate and literate workers detected here may be more associated with an overall depressing effect caused by low literate workers’ reading difficulties. Therefore, Hypothesis 4b predicts that the task self-efficacy of literate workers will be greater than low literate subjects for the directive work scenario.
As has been discussed, the team-based setting is expected to create a more stressful environment for the low literate workers because they fear they are not able to perform sufficiently under conditions where literacy is required. They may have ineffectual beliefs regarding their ability to perform. The directive setting will remove much of the reading requirements and thereby reduce the levels of stress and inefficacy due to anxiety arousal. However, it will not necessarily remove all of the literacy demands and therefore may still have some anxiety arousal.

Also existing research has found that the control coping strategy for dealing with stress is more successful at reducing stress than the escape coping strategy (Leiter, 1991). Then it might be expected that low literate workers who are in the team-based setting but who cope by a control strategy will be successful at reducing some of the stress. The escape strategy does not appear to reduce the stress levels at all; it merely allows the subject to avoid confrontation with them. If the stress is successfully reduced, then the worker may have more efficacious beliefs about his or her task performance. If the stress is not reduced, efficacy beliefs may remain unchanged.
Chapter 3: Method

Sample

Students in Adult Basic Education (ABE) courses throughout West Tennessee were used as subjects in this study. This sample was chosen because ABE students complete an assessment of their reading and skills upon enrolling in the program to determine proper placement and the students’ skills are re-assessed regularly to determine progress. This provided up-to-date reading levels critical to this analysis. The ABE program is divided into three levels. Level 1 includes students who are non-readers up to those reading on a 5.9 grade level. Level 2 encompasses reading levels from 6.0 to 8.9. Level 3 students read at the 9.0 level and above.

The total number of students initially used in the study was 203. Seventy-seven (38%) of the subjects were male and 126 (62%) were female. There were 95 black (46.8%), 104 white (51.2%), three Hispanic (1.5%), and one Asian (.5%) subjects. The average age of the participants was 37.4 years, almost all had not received a high school diploma or equivalent (one had a high school diploma and four had completed the General Equivalency Degree), the majority were not currently employed (122 had no job, 44 were working full-time jobs, and 37 were working part-time jobs), and most had some experience working on teams in the workplace in the past (153 had been on a team, 50 had not).

The sample was divided into low literate subjects and literate subjects based on the most recent reading score available from the ABE class. Students classified as Level One in the ABE were used as the low literate sample. Students classified above Level One were used as the literate sample. The low literate sample contained 121 participants and the literate sample had 82 participants. The disparity reflects that the majority of
students who seek the services of ABE programs are low literate adults. The average reading level for the low literate sample was at the 5.0 grade level, the literate sample was at the 10.0 grade level.

The average math level for the literate group was 9.0. The low literate group’s average math level was 7.14. This indicates that both groups possess numeracy skills sufficient to distinguish between values zero through ten as required by this study.

**Independent Variables**

**Work design.** Work design was divided into two approaches; team and directive work scenarios. In order to convey the meaning of the work designs, videotaped depictions of each were produced. The videos centered around a common set of tasks, organized into three parallel jobs: “the starter,” “the machinist,” and “the specialist” that depict successively increasing levels of difficulty, performed in a team-based work environment and in a directive work environment. The only difference between the videos is the nature of the work design.

The videos were produced by Shawn Wyatt of Mirage Videos in Jackson, Tennessee. The videos were filmed using the facilities of the McWherter Technology Center at Jackson State Community College in Jackson, Tennessee. Actors were volunteers from Union University and the McWherter Technology Center. The actors were utilized in the same capacities for both the team and directive videos to reduce the likelihood of any confounding effect from impressions formed regarding the workers in the video. The script was narrated by Shawn Wyatt and edited in as a voice-over.

The team-based work setting stresses that members:

- function as a team
- share leadership responsibilities with the manager
are involved in planning, controlling, and improving the team’s performance, problem solving
- take an active role in managing themselves and their teammates
- are exposed to a variety of information sources they will have to understand in order to make decisions and carry out production
- will receive and prepare reports of events and information to teammates (Boyette & Boyette, 1995; Wellins et al., 1991)

The directive work setting stresses that

- workers are instructed on procedures for performing tasks
- workers have areas of specific responsibility for task performance
- the task involves simple, routine, and repetitive procedures
- the managers provide clear instructions to the employees (Block, 1987; Boyette & Conn, 1991)

Scripts of the narrative were independently screened by five experts in the field of management to insure the descriptions effectively depicted the two work designs. Scripts were also read to a group of low literate workers who were subsequently asked to restate what they had heard. This procedure was used to assess the degree to which the low literate workers are able to comprehend the work design scenarios. Some words were changed in the script as a result of the feedback from the low literate work group. The final script was written at a 6.2 grade reading level using the Flesch-Kincaid Grade Level assessment available with Microsoft Word software (see the script in Appendix A).

**Coping strategies.** Low literate workers are expected to typically use one of two methods of coping with the stigma of low literacy, either control or escape. Coping strategy was assessed using a modified form of Latack’s (1986) action and cognitive reappraisal items survey. Items were combined to reduce the length of the survey and others reworded to simpler language to improve the low literate workers’ understanding of the questions (see the script in Appendix A and the survey instrument in Appendix B).
The “survey instrument” was contained on the video and read by the narrator to the subjects.

The original coping survey instrument had a Cronbach’s alpha score of 0.65 (Latack, 1986; Leiter, 1991). As a result of the rewording and combination of items to attempt to make the survey more understandable by the low literate subjects, the Cronbach’s alpha for the survey used in this study was only 0.36, well below the acceptable levels for reliability (Sekaran, 2003).

The results of the principal components factor analysis yielded two factors, as expected, accounting for 73.9% of the variance. The first factor consisted of four items. This factor accounted for 46.5% of the variance. The second factor had two items that accounted for 27.4% of the variance. Factor loadings for “think about good things” and “try not to worry” were greater than .40 for both components and were therefore excluded from subsequent analysis (Hair, Anderson, Tatham, & Black, 1992).

The remaining four items were analyzed using the principal components factor analysis. Two factors were again extracted accounting for 85.89% of variance. The first factor, contained two items and was identified as “escape,” accounted for 47.07% of variance. The second factor was identified as “control.” It consisted of two items and accounted for 38.83% of variance. Table 1 shows the total variance explained and Table 2 shows the items and their factor loadings.

Based on the results of the coping strategy instrument, low literate subjects were assigned to the control or escape coping groups based on their scores on the survey. Cluster analysis was used to assign subjects to their appropriate group. Literate subjects
took the coping survey along with the low literate workers to maintain uniformity. The scores of the literate subjects were not processed as part of this study.

Table 1

*Initial Eigenvalues Extraction Method: Principal Component Analysis*

<table>
<thead>
<tr>
<th>Component</th>
<th>Total</th>
<th>Percentage of variance</th>
<th>Cumulative % age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.883</td>
<td>47.068</td>
<td>47.068</td>
</tr>
<tr>
<td>2</td>
<td>1.553</td>
<td>38.825</td>
<td>85.893</td>
</tr>
<tr>
<td>3</td>
<td>.400</td>
<td>10.010</td>
<td>95.902</td>
</tr>
<tr>
<td>4</td>
<td>.164</td>
<td>4.098</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 2

*Component Matrix Extraction Method: Principal Component Analysis*

<table>
<thead>
<tr>
<th>Items</th>
<th>Component</th>
<th>Escape</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you try to pass the work on to someone else?</td>
<td>-.122</td>
<td>.890</td>
<td></td>
</tr>
<tr>
<td>Did you try to get away from reading or try to avoid reading?</td>
<td>.225</td>
<td>.869</td>
<td></td>
</tr>
<tr>
<td>Did you talk to your friends or boss about it?</td>
<td>.955</td>
<td>-1.456E-02</td>
<td></td>
</tr>
<tr>
<td>Did you get someone to help you read it?</td>
<td>.952</td>
<td>-7.628E-02</td>
<td></td>
</tr>
</tbody>
</table>

**Dependent Variables**

*Self-efficacy*. Self-efficacy was measured by following the example of Lee and Bobko (1994). The self-efficacy score was calculated by assessing the magnitude of self-efficacy beliefs as indicated by the subjects’ estimates of how many times they could successfully perform each job (i.e., the starters, the machinists, and the specialists) out of ten attempts. Answers could range from 0, indicating the subject did not believe he or she could successfully perform the job at all, to 10, indicating the subject could successfully perform the job every time. To measure self-efficacy for the directive scenario, the
magnitudes of the efficacy scores for each job in the directive scenario were added. The self-efficacy measure for the team scenario was found by summing the scores for each job under the team scenario. Total self-efficacy was calculated by adding the self-efficacy scores for directive and team scenarios. Difference in self-efficacy was calculated by subtracting directive self-efficacy from team self-efficacy.

**Job preference.** After subjects had seen both video work scenarios they were asked, “If you could have either type job you have seen, which would you choose?”

**Procedures**

Students from the Adult Basic Education classes participated in the study during their regular class time. The groups ranged from four to twenty-eight, which included literate and low literate students. The subjects were introduced to the project by the researcher under the guise of appearing in a study that was to learn the participants’ thoughts about the design of some jobs. A standard introduction was used for each group. (See Appendix A for the script).

Care was taken to insure that the subjects knew this was a study and was not in any way an offer of a job or an interview for a job. The subjects were told that this company did not exist; it did not have any plants in operation in the area and had no plans of beginning operations in the area. Furthermore there was nothing they could say that would get them a job or an interview for a job and nothing they could say that would cause them to lose a job or an interview for a job. They were encouraged to give honest answers based on what they thought, not what they thought some company might be seeking.

There were four questions contained throughout the survey that checked to see if the subjects understood this was a study and was not for a job. The first question, “Is it
clear to you that this is NOT a job interview or a job offer in any way?” was asked at the beginning of the survey after the introduction had been given. The second question was asked at the beginning of the survey that followed the second video. The question asked “I understand that what I am doing now is A) For a job; B) NOT for a job.” The third and fourth questions were the last two of the survey. The questions were “Did you understand that this is a study and not an interview for a job?” and “Did you ever begin thinking that this might lead to a job with MMI?” Twenty-four subjects responded improperly to one or more of the disclaimer questions. Their results were excluded from use in the study.

After hearing a brief overview of the purpose of the study, subjects completed a survey that assessed demographic information and their coping skills. The researcher read each question and its possible answers aloud to the group and allowed time for participants to mark their answers on an answer sheet. (See the survey instruments in Appendix B). Upon completion of the first portion of the survey, participants were asked to write their names on the top of the survey form. This was done to allow ABE instructors to write each student’s reading and math levels to the survey sheets after the students had finished the entire process. Once the scores were added, names were removed from the sheet to insure anonymity.

After completing the initial survey form, the subjects viewed the first video showing the team oriented or directive work scenario. Groups were alternately shown the team or directive video first to check for any influence the order of viewing the videos might have on perceived self-efficacy. A comparison of the means between groups who first viewed the team video versus groups who first viewed the directive video revealed no significant difference due to order of viewing (directive self-efficacy, $t = 1.323$, $df =$
177, \( p = .187 \); team self-efficacy, \( t = 0.583, df = 177, p = .56 \). The subjects were therefore not sub-divided based on the order in which they viewed the videos.

Self-efficacy was measured after subjects had viewed the portion of the video containing the job information. The narrator on the video read the survey to the subjects. The subjects were given the second survey instrument (see Appendix B) to write their responses. The video would show on the screen the same question contained on the survey. The narrator would slowly read the question and then explain how to mark the survey to indicate the subject’s answer.

The second video was shown after subjects had finished the self-efficacy survey for the first video. Self-efficacy was measured for the alternative job design just as before. The subjects were then asked to choose which of the two jobs depicted in the videos they would prefer to have.

Upon completion of the final survey, participants were asked to give their completed sheets to the assistant in the room, who was the researcher. The subjects were thanked for sharing their thoughts about the jobs and were wished the best of luck for the future.
Chapter 4: Results and Discussion

The total number of students initially used in the study was 203. Twenty-four subjects were disqualified from consideration due to one or more incorrect responses on the four disclaimer questions. The remaining 179 students comprised the sample for this study. Sixty-eight (38%) of the subjects were male and 111 (62%) were female. There were 81 African American (45.3%), 95 Caucasian (53.1%), and 3 Hispanic (1.7%) subjects. The average age of the participants was 37.7 years, almost all had not received a high school diploma or equivalent (one had a high school diploma and four had completed the General Equivalency Degree), the majority were not currently employed (105 had no job, 40 were working full-time jobs, and 34 were working part-time jobs), and most had some experience working on teams in the workplace in the past (140 had been on a team, 39 had not).

There were 106 participants in the low literate sample and 73 in the literate sample. The average reading level for the low literate subjects was at the 5.04 grade level and average math level was 7.23 grade level. The average reading level for the literate sample was 10.14 grade level and the average math level was 9.0.

Hypothesis 1a

To test hypothesis 1a, that self-efficacy would be lower for the low literate subjects after the team scenario than after the directive scenario, a paired samples t-test was run. Results are presented in Tables 3 and 4.

As Table 4 shows, Hypothesis 1a is supported. Self-efficacy perceptions of low literate workers were lower for the team work design than for the directive design. The difference was statistically significant ($p < .001$).
Table 3

*Treatment Means: Self-Efficacy of Low Literate Subjects by Work Design*

<table>
<thead>
<tr>
<th>Self-efficacy</th>
<th>$n$</th>
<th>$M$</th>
<th>$SD$</th>
<th>$SE$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directive</td>
<td>106</td>
<td>18.78</td>
<td>6.11</td>
<td>.59</td>
</tr>
<tr>
<td>Team</td>
<td>106</td>
<td>13.77</td>
<td>6.25</td>
<td>.61</td>
</tr>
</tbody>
</table>

Table 4

*t-test for Hypothesis 1a: Self-Efficacy of Low Literate Subjects by Work Design*

<table>
<thead>
<tr>
<th>$T$</th>
<th>$df$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.568</td>
<td>105</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Hypothesis 1b**

It was predicted that low literate workers would express a greater preference for the directive work design than for the team work design. Frequencies of expressed preference for work design were compared and the results are presented in Table 5.

Table 5

*Low Literate Subjects Work-Design Preferences*

<table>
<thead>
<tr>
<th>Work-design preference</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directive</td>
<td>79</td>
<td>79.5</td>
</tr>
<tr>
<td>Team</td>
<td>27</td>
<td>25.5</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Low literate workers expressed a preference for the directive work environment over the team environment by more than two to one. Chi-square ($1, n = 106$) measured 25.51, $p < .001$. This shows support for hypothesis 1b.
Hypothesis 2a

A paired samples t-test was performed on the literate subjects to determine if their self-efficacy was greater for the team based work design than for the directive design.

Tables 6 and 7 show the results from this analysis.

Table 6

Treatment Means: Self-Efficacy of Literate Subjects by Work Design

<table>
<thead>
<tr>
<th>Self-efficacy</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directive</td>
<td>73</td>
<td>21.18</td>
<td>7.84</td>
<td>.92</td>
</tr>
<tr>
<td>Team</td>
<td>73</td>
<td>20.59</td>
<td>8.27</td>
<td>.97</td>
</tr>
</tbody>
</table>

Table 7

t-test for Hypothesis 2a: Self-Efficacy of Literate Subjects by Work Design

<table>
<thead>
<tr>
<th>T</th>
<th>Df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.702</td>
<td>72</td>
<td>.093</td>
</tr>
</tbody>
</table>

Hypothesis 2a is not supported ($p > .05$). There is not a significant difference of the self-efficacy beliefs of literate workers between the two work designs.

Hypothesis 2b

This hypothesis proposes that literate subjects will express a greater preference for the team work design than the directive design. Results are presented in Table 8.

The chi-square statistic ($1, n = 73$) was 23.03, $p < .001$ and showed support for this supposition.
Table 8

**Literate Subjects Work-Design Preferences**

<table>
<thead>
<tr>
<th>Work-design preference</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directive</td>
<td>16</td>
<td>21.9</td>
</tr>
<tr>
<td>Team</td>
<td>57</td>
<td>78.1</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Hypothesis 3a**

Hypothesis 3a predicts that low literate subjects who cope with the control strategy will have greater total self-efficacy (measured by combining directive and team self-efficacy scores for each individual) than those who use the escape strategy. Tables 9 and 10 present the results of an independent samples t-test for this hypothesis.

Table 9

**Treatment Means: Total Self-Efficacy of Low-Literate Subjects by Coping Style**

<table>
<thead>
<tr>
<th>Total self-efficacy</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control strategy</td>
<td>59</td>
<td>32.19</td>
<td>12.29</td>
<td>1.60</td>
</tr>
<tr>
<td>Escape strategy</td>
<td>47</td>
<td>33.02</td>
<td>10.18</td>
<td>1.49</td>
</tr>
</tbody>
</table>

Table 10

**t-test for Hypothesis 3a: Total Self-Efficacy of Low-Literate Subjects by Coping Strategy**

<table>
<thead>
<tr>
<th>T</th>
<th>Df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>-.374</td>
<td>104</td>
<td>.709</td>
</tr>
</tbody>
</table>

There is no support for this hypothesis ($p > .05$).

52
Hypothesis 3b

This hypothesis suggests that when faced with the team-based work design the self-efficacy of low literate workers will be greater for those who employ the control coping strategy. Results are presented in Tables 11 and 12.

Table 11

Treatment Means: Team-Based Self-Efficacy of Low-Literate Subjects by Coping Style

<table>
<thead>
<tr>
<th>Total self-efficacy</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control strategy</td>
<td>59</td>
<td>13.92</td>
<td>6.72</td>
<td>.88</td>
</tr>
<tr>
<td>Escape strategy</td>
<td>47</td>
<td>13.60</td>
<td>5.66</td>
<td>.83</td>
</tr>
</tbody>
</table>

Table 12

t-test for Hypothesis 3b: Team-Based Self-Efficacy of Low-Literate Subjects by Coping Strategy

<table>
<thead>
<tr>
<th>T</th>
<th>Df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>.260</td>
<td>104</td>
<td>.795</td>
</tr>
</tbody>
</table>

The independent samples t-test indicated no significant difference ($p > .05$) between the team-based self-efficacy scores of low literate subjects attributed to coping strategy.

Hypothesis 3c

Self-efficacy of low literate workers after viewing the directive work design video was the subject of this hypothesis. It was expected that self-efficacy would be greater for those who used control as the coping style. Results are given in Tables 13 and 14.
Table 13

*Treatment Means: Directive Work-Design Self-Efficacy of Low-Literate Subjects by Coping Style*

<table>
<thead>
<tr>
<th>Total self-efficacy</th>
<th>( n )</th>
<th>( M )</th>
<th>( SD )</th>
<th>( SE )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control strategy</td>
<td>59</td>
<td>18.27</td>
<td>6.72</td>
<td>.88</td>
</tr>
<tr>
<td>Escape strategy</td>
<td>47</td>
<td>19.43</td>
<td>5.25</td>
<td>.77</td>
</tr>
</tbody>
</table>

Table 14

*t-test for Hypothesis 3c: Directive Work-Design Self-Efficacy of Low-Literate Subjects by Coping Style*

<table>
<thead>
<tr>
<th>( T )</th>
<th>( df )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.966</td>
<td>104</td>
<td>.336</td>
</tr>
</tbody>
</table>

Results reveal no support for hypothesis 3c. This study found no significant difference (\( p > .05 \)) between the low literate workers’ self-efficacy measured after the directive work design video for the two coping styles.

**Hypothesis 3d**

This hypothesis suggested that there would be a greater difference between low literate workers’ self-efficacy scores by coping style for the team scenario than for the directive scenario. Tables 15 and 16 show the results from this analysis.

Table 15

*Treatment Means: Difference in Self-Efficacy of Low-Literate Subjects by Coping Style*

<table>
<thead>
<tr>
<th>Difference in self-efficacy</th>
<th>( N )</th>
<th>( M )</th>
<th>( SD )</th>
<th>( SE )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control strategy</td>
<td>59</td>
<td>4.36</td>
<td>5.47</td>
<td>.71</td>
</tr>
<tr>
<td>Escape strategy</td>
<td>47</td>
<td>5.83</td>
<td>3.93</td>
<td>.57</td>
</tr>
</tbody>
</table>
Table 16

_t-test for Hypothesis 3d: Difference in Self-Efficacy of Low-Literate Subjects by Coping Strategy_

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>T</em></td>
<td><em>df</em></td>
</tr>
<tr>
<td></td>
<td>-1.555</td>
<td>104</td>
</tr>
</tbody>
</table>

This analysis yielded no significant difference (_p_ > .05) between the differences in self-efficacy scores based on coping strategy for the team and directive scenarios.

**Hypothesis 4a**

This hypothesis compared the differences in efficacy scores for the team scenario between literate and low literate subjects. The expectation was to find that self-efficacy for literate subjects would be greater than low literate subjects for the team scenario.

Results are presented in Tables 17 and 18.

Table 17

_Treatment Means: Self-Efficacy for Literate versus Low-Literate Subjects in the Team-Based Work Design_

<table>
<thead>
<tr>
<th>Self-efficacy</th>
<th><em>n</em></th>
<th><em>M</em></th>
<th><em>SD</em></th>
<th><em>SE</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low literate</td>
<td>106</td>
<td>13.77</td>
<td>6.25</td>
<td>.61</td>
</tr>
<tr>
<td>Literate</td>
<td>73</td>
<td>20.59</td>
<td>8.27</td>
<td>.97</td>
</tr>
</tbody>
</table>

Table 18

_t-test for Hypothesis 4a: Self-Efficacy for Literate versus Low-Literate Subjects in the Team-Based Work Design_

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>T</em></td>
<td><em>df</em></td>
</tr>
<tr>
<td></td>
<td>-6.275</td>
<td>177</td>
</tr>
</tbody>
</table>
Support was found for this hypothesis ($p < .001$). This indicates that efficacy scores for literate workers exceeded those of low literate workers.

**Hypothesis 4b**

This hypothesis explores the difference in self-efficacy scores on the directive work design between literate and low literate workers. It is expected that literate workers would have greater efficacy scores. Results are presented in Tables 19 and 20.

Table 19


<table>
<thead>
<tr>
<th>Self-efficacy</th>
<th>$n$</th>
<th>$M$</th>
<th>$SD$</th>
<th>$SE$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low literate</td>
<td>106</td>
<td>18.78</td>
<td>6.11</td>
<td>.59</td>
</tr>
<tr>
<td>Literate</td>
<td>73</td>
<td>21.18</td>
<td>7.84</td>
<td>.92</td>
</tr>
</tbody>
</table>

Table 20

*t-test for Hypothesis 4b: Self-Efficacy for Literate versus Low-Literate Subjects in the Directive Work Design*

<table>
<thead>
<tr>
<th>$T$</th>
<th>$df$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2.293</td>
<td>177</td>
<td>.023</td>
</tr>
</tbody>
</table>

The difference between the mean self-efficacy scores of literate and low literate workers in the directive work design is significant ($p < .05$).
Chapter 5: Discussion

The focus of this study was to examine the impact of two alternative work designs on the self-efficacy beliefs of low literate employees. In the course of the study, the initial examination was on the relationship between the self-efficacy of low literate workers facing the alternative work designs. Next, the impact of work design on the self-efficacy and work preferences of literate workers was considered. Attention was then turned to the coping strategies of low literate workers and how those coping styles influenced self-efficacy perceptions. And finally, the self-efficacy beliefs between literate and low literate subjects were explored.

The data reported in Table 4 indicate that low literate workers’ self-efficacy beliefs are greater for the directive management scenario than for the participative design. It is conjectured here that self-efficacy beliefs are greater for the directive management scenario among the low literate subjects due to several factors. The team management scenario creates a situation in which the low literate subject experiences fear arousal due to the reading requirement. This fear arousal may be due to experienced failures at reading in the past or to feelings of inundation and intimidation at the increased literacy requirement imposed in the team scenario.

The low literate workers also expressed a significantly higher preference for working in the directive management scenario than the team scenario. This finding has several possible implications. Whereas self-efficacy implications may function on a nearly subliminal level, choice preferences over work situations are very much on the surface. Subjects are aware of differences in the environments and consciously preferred one over another.
The low literate subjects seem very aware of the literacy requirements of a situation since the scenarios were such that the jobs themselves were identical except for the participation requirement. They appear sensitive to potential threatening situations and will seek alternative situations when possible. Focusing on the more formidable aspects of task performance in the team situation likely led the low literate workers to select the directive management scenario as their preferred work environment. It is suggested that the manager relieves the workers of much of the literacy requirement in the directive setting therefore making it a less threatening working environment for the low literate workers.

Low literate workers may have greater efficacy in the directive settings because there is only one person that must be dealt with rather than multiple people in the team setting. In the directive setting, the low literate employee would have to either “fool” or “conspire with” the manager to effectively deal with the literacy issue. On the team, the workers would have multiple people with which they would have to cope therefore masking the inability to read is much more difficult.

The second set of hypotheses looked at the literate workers and how their efficacy beliefs differed with the two scenarios. No support was found for the contention that literate workers would have greater efficacy beliefs for the team environment than the directive management environment. Literate workers expressed a significantly higher preference for the team- based design than the directive management design.

There was no reason to expect that literate workers would have any reason to fear the team environment due to the increased reading requirement so efficacy beliefs would not be lower. Since the results were not significant, this effect was not very powerful on
the literate subjects. It was expected that literate workers would prefer the team scenario because of the positive outcomes such as autonomy, meaningfulness of work, and work responsibility associated with participation.

Literate workers may prefer participative work environments and may enjoy the increased levels of job satisfaction without a corresponding impact on their self-efficacy beliefs. They may have full confidence in their abilities to perform in either environment, therefore having similar efficacious beliefs, yet have a personal preference for one of the environments.

The next set of hypotheses introduced coping strategies used by low literate workers to deal with the stress of illiteracy. It was expected that the control coping strategy would be a more effective means of dealing with the stress of reading than the escape strategy. In examining the relationship between the use of control and escape coping strategies in the team and directive management scenarios, no significant differences in self-efficacy beliefs were detected. This result is likely the result of the poor reliability of the version of the coping scale used. The scale was modified from the original coping scale used by Lattak (1986) to attempt to make it more readable for the low literate subjects. The revisions, however resulted in a Cronbach’s alpha score of only 0.36. Any alpha score below 0.6 is considered poor (Sekaran, 2003).

Beyond the scale reliability, the lack of significant differences may be a result of the study design. It is difficult to accurately assess an individual’s coping mechanism in a contrived, video-based setting. An experimental design that allowed for observation of the subjects in threatening situations would provide a much more reliable means to measure the effect that coping strategy might have in the two work settings.
It should also be considered that the lack of significant differences in efficacy beliefs of workers who used different coping strategies for the two work designs is more than a product of the data gathering technique used. It may be that when workers are facing new situations, such as they did in viewing the jobs shown on the videos, neither coping strategy is initially more effective than the other. The use of the control coping strategy may be dependent on the low literate worker’s level of trust in the boss or co-worker. Before the low literate worker feels confident enough to confide his illiteracy with the confidant, he must have some history on which to ascertain the loyalty of the confidant. As the worker learns more about the potential confidants and the environment, the control strategy may emerge as a more effective mechanism for reducing stress and, therefore, enhancing self-efficacy perceptions. There is room for more exploration into these relationships.

An examination into the relationship between literate workers’ self-efficacy beliefs and low literate workers’ self-efficacy beliefs showed that literate workers have higher efficacy beliefs than low literate workers for both work design settings. These findings are not surprising. Literate workers should have no anticipatory anxiety that would lower their self-efficacy as the low literate workers have. The reason literate workers had greater efficacy beliefs than the low literate workers may be the result of lower general feelings of self-efficacy held by the low literate workers. This general feeling would be more aligned with the concept of self-esteem. The inability to read causes a lower level of confidence in one’s abilities in general and therefore lowers self-efficacy.
Limitations

The most obvious challenge to conducting research on low literate subjects is overcoming the subjects’ reading difficulties. Traditional survey instruments are ineffective if the subjects are unable to comprehend the instructions, questions, and/or possible answers. Individual interviews would overcome the reading issue but maintaining consistency across the interviews would be difficult. Adams (1993) reports that pictorial stimuli and binary response scales have been used in past research, but are limited to very simple issues.

The issue of inability to read a survey can be dealt with through the use of videotape. The video presentation has the advantage of being uniform for each participant. The video also allows pictures to supplement the narrative. It is believed that this combination aids in the subjects’ achieving a fuller understanding of the nature of the two work settings. Care must be given to develop the script of the video to make it understandable for the low literate subjects. In addition to re-writing the script many times to reduce the reading level, this study used a focus group of low literate adults who were read segments of the script to ensure the scenarios, questions, and answers were understandable.

Another major obstacle to conducting research on low literate workers is the actual identification of low literate workers. For reasons discussed above, low literate workers do not want to be identified. Many times they are not identifiable by company documentation or supervisory verification since they hide, pass, and cover their problem. Unless companies require reading assessments prior to hiring workers, it would not be feasible to conduct an organization-wide reading skills test to identify literate and low literate workers. The fact still remains that the ones being sought are the ones who would most try to avoid such measures.
In an effort to overcome the identification problem, this study used a sample of low literate adults who have self-identified. They had all sought the services of the Adult Basic Education program. While the availability of individuals who have voluntarily identified themselves as low literate is fortuitous, it is not perfect. These individuals are members of the target population, however they are most likely not the typical member of the population. Because they have self-identified, they are more likely to believe that the causes of their performance are controllable and they are not as likely to be resistant to change as the low literate workers who have not self-identified. Based on Gist and Mitchell’s (1992) work, the use of self-identified low literate workers will lead to the expectation that the sample group may have efficacy beliefs that exceed the unidentifiable group of low literate workers, but not to the extent that the self-identified sample has become equivalent to mainstream employees.

Although the self-identification issue is a limitation it does not render the results completely invalid. It is likely, however, that even stronger results might be found if the full population of low literate workers were available.

Another limitation is that the environment in which the tasks depicted in the video tapes are performed were completely new to the subjects. The task was something with which the subjects might be familiar, but it was in a new environment. It is possible that results would differ if low literate workers could be studied in their current work environments. In an existing work environment, low literate workers who use the control coping mechanism would have established relationships. In a new environment relationships would have not yet been established. This could have limited the viability of
the control strategy as an effective means of coping and negatively impacted the efficacy beliefs of those who employ that strategy.

A final limitation to this study deals with the method used to collect information regarding the coping style that low literate workers employed. A questionnaire was used in this study for efficiency, whereby the subjects’ coping styles might be better assessed by observing the subjects in action. The necessity of keeping scripts and surveys at low reading levels also resulted in simplistic situations that may not have been sufficient to create the proper mental situation that would have allowed the subjects to respond as they might actually behave in a real situation.

**Conclusion**

This study provides important implications for management practitioners and researchers alike. The most significant results found were that self-efficacy beliefs of low literate workers are greater for traditional directive work environments than for team environments and that low literate workers prefer a directive work environment if given a chance to choose. Lower efficacy beliefs among low literate workers may result in avoidance behaviors that shield workers from confronting situations where they doubt they will be able to perform (Bandura 1977a, 1982, 1991). They may not even be willing to apply for jobs that are participative in nature. In participative situations workers at best will have reduced motivation to attempt performance (Abramson et al., 1978).

The presence of significant numbers of low literate workers will require companies to strongly consider the choice of the work design employed. Many companies may choose to continue with a directive work design and will need to equip managers to deal with the low literate employees. Some companies may be required to change from a team design to a directive design to best utilize its existing employee base,
if that base contains a large segment of low literate workers whose skills cannot be changed or upgraded.

On the other hand, it may be that some companies face an environment that lends itself best to a participative work design. It may be necessary for these companies to adopt or continue to utilize the team approach. If so, it will also be necessary for these companies to take appropriate measures to effectively incorporate low literate workers into the process, and to otherwise enhance their self-efficacy to better enable them to cope with the participative environment.

The first approach is obviously to provide training to low literate workers to allow them to reach the levels of literacy demanded by their particular workplace. Many companies are already working to either provide on-site literacy training or to send employees through off-site literacy training programs.

While providing the necessary skills is a necessary requirement, it is not sufficient to ensure that low literate workers, or previously low literate workers, will function fully in the team environment. These workers will also need programs geared to enhance their self-efficacy beliefs. They will need to gain the confidence in their ability to use their newly acquired literacy skills. Opportunities to achieve smaller literacy successes will help the low literate workers find new levels of confidence.

Third, literate workers may need to receive sensitivity training to help them know how to best work with low literate workers. This is particularly true for team leaders. Training the team leaders to be aware of the nature of the information used in the work process may help them find ways to present information to low literate workers to facilitate their understanding. Making leaders aware of the literacy problems that exist
may prevent misinterpretation of low literate workers’ behavior. Rather than being disinterested and unwilling to participate, low literate workers may simply not be able to read memos to allow them to participate. A better understanding of the problems faced by low literate workers as well as the strategies they use to cope with their problems would help leaders provide a better leadership and work environment to facilitate low literate workers performance and involvement.

And finally the design of the team itself may improve the performance of low literate workers. Organizing a team by placing your most literate workers along side the low literate workers to “offset” each other may inhibit the efforts of the low literate workers. Organizations may find that a “hierarchy of teams” provides the best approach. Using a hierarchy of teams would allow teams to be organized along literacy skill levels. Some teams would have all literate workers; some teams would have more low literate workers. Then teams can be assigned different tasks according to each team’s ability level. The lower skilled teams would be given tasks that require less information processing and higher skilled teams would be given tasks that require greater information processing. Low literate workers would still be able to participate with a group and enjoy the advantages of social interaction but the fearful event of reading would be removed.

To the extent that an employer has made a strategic choice that a team based work design is most appropriate for its production process and that employer is facing a labor market that contains significant numbers of low literate workers, the employer may have to carefully choose its message in advertising job openings. Low literate workers may be less likely to make application for positions they perceive to involve greater reading requirements. The company would need to look for other aspects of the position to
emphasize when advertising openings and it may want to find entry ports for low literate workers that would gradually introduce them into the team environment in a less threatening manner.

The primary importance and contribution of this study is in its attempt to design a research project that targeted what is perhaps the segment of the workplace most neglected by management academicians today. Adams (1993) pointed out that there were “hundreds of articles [pertaining to workplace literacy] in publications aimed at management practitioners, but a near void in mainstream academic journals and conference programs” (p. 9). Adams (1992) studied samples used in academic research from articles published in the Academy of Management Journal, Administrative Science Quarterly, Journal of Applied Psychology, Organizational Behavior and Human Decision Processes, and the Journal of Management. Not one article had used low literate workers as a sample.

The reason for the neglect of low literate subjects is more from pragmatics than any sort of prejudicial control on the part of researchers. The most common data collection technique is the use of a written survey and the most common population for surveys is college students. The low literate worker is not likely to be found in either (Adams, 1993). Research that by design excludes as much as 25% to 40% of the population cannot be generalized to the population unless the excluded group is equivalent to the included group. The use of videotaped scenarios and narrated surveys introduces a method of data generation that opens the doors to future research with this population.
A number of research streams should arise as a result of this study. First, the method used in data collection itself warrants additional study. Explicit comparisons between traditional paper and pencil surveys and video based surveys should be made. Do subjects comprehend and recall video scenarios better than written scenarios?

The issue of coping strategies and self-efficacy of low literate workers needs to be explored. This study did not find significant effects of either coping strategy on self-efficacy of low literate subjects. That finding does not appear to be consistent with research on a general sample (not literate specific) by Leiter (1991).

It is hoped that this study will build the bridge to the low literate workers that will accommodate future consideration on the part of management researchers. By including this significant portion of the American workforce explicitly in theoretical and practical discussions it is expected that ways will be found to capitalize on the opportunities that exist in this arena.
References


Talwalker, V. (2003). *Should illiterate health workers be allowed to treat patients?* 


Appendix A: Script Used for Data Collection

Script

**Project introduction.** Thank you very much for coming to do this today. I’m Kenny Holt and I work at Union University in Jackson. I am doing a study to write a paper and I’m trying to find out what people think about different jobs. Let me make it clear that this is not an offer of a job in any way at all. The company that you will hear about does not have a plant in Tennessee and is not planning to open a plant in Tennessee. In this study I’m going to show you some jobs. What you think about these jobs is very important. You can help us know how to plan jobs in the future so people can do their best work. It will also let us know what kind of a job people like best and think they can do best. I’m going to ask some questions about you, then show you a video about some jobs. Shawn Wyatt will be on the video to ask you questions about those jobs. Please answer the best you can. I want you to be completely honest in your answers. No one will know who you are. And again, we’re not going to be offering a job to anyone based on your answers. You are also free to stop answering the questions at anytime, but I do hope you will decide to stay until the end.

You should have an answer sheet and a pencil in front of you. If you do not, please ask for them now.

Again, we want to find out how we can plan our jobs so our workers can do their very best. This is NOT a job interview. We will not be hiring anyone. We only want to know what you think about our jobs. Okay?

Question number 1. Is it clear to you that this is NOT a job interview or a job offer in any way? Please mark either Yes, I know this is not a job offer or No, I think this may be for a job. Now I’m going to ask some questions about your background. Please mark your answer on the answer sheet. After I ask the
question I’ll let you know exactly how to mark your answer. If you have a question or are not sure of something, please ask for help.

Question number 2. What is your sex? Please mark either Male or Female.

Question number 3. What is your race? Please mark Black, Hispanic, or White.

Question number 4. How old are you? Write your age in the blank.

Question number 5. Do you have a high school diploma, a GED diploma, or a college degree? Please mark either NO, I do not have a High School diploma; YES, I have a High School diploma; or YES, I have a GED diploma, Yes I attended college, or Yes, I have a college degree.

Question number 6. Are you currently working? Please mark the answer that best tells what you are currently doing. I’m not working; I have a full-time job; I have a part-time job.

Question number 7. Have you ever had a job where you were on a team? Please mark either YES, I have been on a team at work before or NO, I have never been on a team at work before.

Great, thank you! Next I’m going to ask you some questions about situations where you may have been asked to read while you were at work. I would like for you to think back to a time at work when you had some trouble reading something. I’d like to know how you have handled these situations. I’m going to read to you some ways other people have handled these situations. Then I’d like for you to tell me how often you have done the same things.

Question 9: When you have faced situations at work where you have been asked to read something but could not, did you talk to your friends at work or your boss about it? If you never talked to your friends at work or your boss about not being able to read something mark 0. If you talked to your friends at work or your boss about not being able to read a few times mark 1. If you talked to your friends at work or your boss about half the times you could not read something at work mark 2. If you talked to your friends at work or your boss a lot when you have had trouble reading something at work, mark 3. If you have almost always talked to your friends at work or your boss about this situation, mark 4.

Question 10: When you have faced situations at work where you have been asked to read something but could not, did you get someone to help you read it? If you
have never asked your friends to help you read something you couldn’t read, mark 0. If you have asked your friends a few times to help you read something you couldn’t read, mark 1. If you have asked your friends to help you read something about half the time you couldn’t read it, mark 2. If you have asked your friends for help reading a lot at work, mark 3. If you have almost always asked your friends to help you read something that you couldn’t read, mark 4.

Question 11: When you have faced situations at work where you have been asked to read something but could not, did you try to think about good things to take your mind off the reading? If you have never looked for other good things in your job to make up for not being able to read something, mark 0. If you have looked for other good things in your job a few times to make up for not being able to read something, mark 1. If you have looked for other good things in your job to make up for not being able to read something about half the time, mark 2. If you have looked for other good things in your job to make up for not being able to read something a lot, mark 3. If you have almost always looked for other good things in your job to make up for not being able to read something, mark 4.

Question 12: When you have had work to do on your job that required you to try to read something you couldn’t, did you try to pass the work on to someone else? If you have never tried to pass work along to someone else when you had trouble reading, mark 0. If you have a few times tried to pass work along to someone else when you had trouble reading, mark 1. If you have tried to pass work along to someone else about half the times you had trouble reading, mark 2. If you have tried to pass work along to someone else a lot of the times you had trouble reading, mark 3. If you have almost always tried to pass work along to someone else when you had trouble reading at work, mark 4.

Question 13: When you have faced situations at work where you have been asked to read something but could not, did you just try not to worry about it? If you never just tried not worrying about not being able to read something at work, mark 0. If you have tried a few times to not worry about not being able to read something at work, mark 1. If you have tried not to worry about not being able to read something at work about half the time, mark 2. If you have tried a lot not to worry about not being able to read something at work, mark 3. If you have tried almost always not to worry about not being able to read something at work, mark 4.

Question 14: When you have faced situations at work where you have been asked to read something but could not, did you respond by trying to get away from reading or avoid reading? If you have never tried to get away from or avoid reading at work, mark 0. If you have tried a few times to avoid reading at work, mark 1. If you have tried to get away from reading about half of the time, mark 2. If you have tried to get away from situations a lot where you had trouble reading, mark 3. If you have almost always tried to get away from or avoid situations where you had trouble reading at work, mark 4.
Great! Thank you very much for your help. That completes the first part of the study. Next we have Shawn Wyatt who is going to tell you all about some jobs that we would like for you to think about. Be sure to listen closely and try to think what it would be like to do the job he will tell you about. You may take notes if you’d like. Thanks again, and here’s Shawn!

**Video Preview One**

**Traditional manager.** Welcome to Machine Molding Incorporated’s job preview. I’m Shawn Wyatt and I’ll be your host for this look at what could be a career with America’s largest maker of precision metal products for most any application. I’ll show you potential jobs at Machine Molding. We are not offering you a job, we just want to know what you think about the jobs we will show you. We want to know what you think so we can make our jobs so our workers can do their best work.

Machine Molding has been in business since 1953. We have two plants and employ over 500 people. We do not have a plant in West Tennessee right now. We specialize in making many different types of metal moldings that are used by other companies to make thousands of products. No job is too large or small for us to tackle.

The company has several divisions that work in the plant. The division I’ll show you is the tool and die shop, we call it the Tool & Die shop. Please watch the video carefully. Feel free to take notes. You will be asked a few questions following this video. Thank you for helping us.

**The Tool and Die Shop**

In the Tool & Die shop there are three types of jobs: a Starter, a Machinist, and a Specialist. The jobs are all related but are done separately. The Starter’s job is where new
workers begin in the Tool & Die shop. It is also the first step in making any mold. The Starter’s job is the simplest job in the shop. They get the materials ready and pass them along to either the Machinists or Specialists. The Machinist’s position is next hardest and the Specialist is the top job and toughest in the Tool & Die shop.

The Tool & Die shop gets three types of orders. Sometimes the shop gets orders for a regular mold. These orders are pretty easy to make because they are made over and over. The Machinists make these. These regular orders are usually for large amounts from 10 up to 500 pieces. Sometimes the Tool & Die shop gets orders for a mold it has never made before. The Specialists make these molds.

The Tool & Die shop is managed by the Tool & Die manager. He oversees all the day-to-day work in the tool and die shop. The manager’s job is to help the employees know exactly what to do and to make their jobs easier. He keeps the employees up-to-date on rules about the way molds are put together. He trains the employees on each step of a new job and makes sure the employees understand what they are to do and how to do it. The manager gets all incoming orders on a blueprint, we call it a print, and he takes the order to the Starters first.

The Starters

The Starters have to get all of the materials that are needed to make the mold. The Starters get the orders from the manager. The manager makes a list of all the materials needed on a materials card, puts it on the print and gives it to a Starter. The materials card will show the stock numbers so you can match it with the materials you need. The card will also contain exact measurements for the materials. Sometimes the materials will need to be cut or have minor stamping done to them. Sometimes Starters work by
themselves to fill an order. Other times they work together to fill an order. The manager
goes over any unusual materials or instructions and answers any questions the Starters
may have.

The Starters take the order to the materials area and get all the materials needed.
They find the exact parts by matching the parts’ names and numbers on the card to the
parts’ names and numbers on the bins. The names and numbers must be the same. Then
they mark the item off on the materials card after they have gotten it. When they have all
the materials, they make any cuts or punches that are needed. Then they mark the
materials card. Finally they put all the materials onto the holding carts with the materials
card attached to show that all parts are there and cut to order.

The Starters look to make sure there is enough of the material to complete an
order and they check the quality of the material when they pull it. When they see that
they are almost out of a part, they tell the manager and he orders more. The manager
watches the quality of the materials he buys. He makes sure the parts are good enough to
meet the standards for each order. If the Starters see something wrong with the material,
they tell the manager as soon as possible. A common problem is rust on the materials.

Starters must fill out a time report of the number of hours worked on each order.
This is important for the company to know how much to charge for each order. The time
reports are given to the manager at the end of each week. The manager adds up the
numbers for all workers.

Starters must keep work stations neat, safe, and orderly. Tools, equipment,
materials, and work in progress must be put away at the end of each work day. All
Starters look over the entire work area for any safety risks. They report any risks to the manager as soon as possible.

The manager will keep up with all mail or calls coming into the Tool & Die shop from anyone such as customers, suppliers, safety regulators, the Human Resource Department, or other departments inside Machine Molding. This is important. Sometimes the government adds new rules on materials or procedures used by the Tool & Die shop. The manager will make sure everyone knows about any changes. Any letters or other contacts with people outside the Tool & Die shop are handled by the manager.

**The Machinists**

The Machinists make the metal products for the big orders. The manager gets the order first. He gives a copy to the Starters and keeps a copy for him to use. Each order will tell what the customer wants on the blueprint, or the print we call it. Some orders will go to the Machinists and other orders will go to the Specialists. If it is a product that we have made before, it usually goes to the Machinists. If it is a new order it goes to the Specialists. The manager will write out a set of instructions that tell how to make the product. The manager will then meet with the Machinists to show and explain how to make it.

Sometimes the order will be small and one Machinist can make the whole thing. More often the order is made by several Machinists working together. The order may be passed from one Machinist to another until it is completed. The manager assigns Machinists to their work stations and explains each step of production when a new order is started.
Machinists organize the materials in the bin and put them together the way the manager showed them. Machinists check the quality of the materials as they make the product. After they have made the product, the Machinists check the product to make sure it's okay. They check to make sure the product has been made just like the print said. If everything checks out, the Machinists “finish” the product by smoothing any rough edges.

Sometimes a Machinist may have trouble making a product. This happens more when they make something for the first time. The Machinist should try to solve the problem by himself if he can. The manager is always available to help any Machinist who needs him. The manager holds meetings with the Machinists to show them how to do the hard parts of the orders. The manager also trains new Machinists when they are moved up to make sure they know how to use all the machinery in the Tool & Die shop.

Machinists also fill out a time report of the number of hours worked on each order. They have to write what they did on each order on the materials card and attach the card to the finished product. The company needs to know this so they know how much to charge the customer for each order. The time reports are given to the manager at the end of each week. The manager also gets the materials cards when orders are finished. The manager adds up the numbers for all workers.

Just like the Starters, Machinists must keep work stations neat, safe, and orderly. Tools, equipment, materials, and work in progress must be put away at the end of each work day. All Machinists look over the entire work area for any safety risks, then they report any risks to the manager as soon as possible.
And as before, the manager keeps up with all calls or mail coming into or going out of the Tool & Die shop. The manager tells the Machinists anything they need to know about rules on how the work must be done.

**The Specialists**

The Specialists make the metal products for the hardest orders that come in. Most of these orders are small orders for 1 to 50 pieces. Most of the time the products the Specialists make have not been made before. For example, the Specialists have made special valves for Marine customers and special tools for surgery in the Medical field.

The Specialists job is the top job in the Tool & Die shop.

As we said before, the manager gets all orders first. Then he sends the order to the Starters to get the materials. Next the manager will give the order to the Specialists or Machinists.

Since the products the Specialists make have not been made before, these orders will normally call for new ways to do things. The manager carefully goes over each order and comes up with a set of instructions. The manager meets with the Specialists and goes over the instructions on how to make the product. There is a lot of discussion between the manager and Specialists and even the design engineers especially in the early stages of production. There are several trial and error attempts at making the products before the best way is found. The manager makes sure all Specialists know the latest changes.

The Specialist and Machinist jobs are a lot alike, but the Specialists don’t do the same thing over and over as much as the Machinists. Specialists do something different almost every day. While the Machinists rarely do anything different from the way the manager
showed them to make the order, the Specialists may have to try things on their own to see what will work without the manager's help. So, Specialists do not work as closely with the manager as other employees.

Specialists should know and understand the rules for making the products. Specialists know how to find how much load or pressure the materials can handle. They also need to know what materials can be used together and which ones cannot. The manager meets with the Specialists to help them understand the procedures and details of the job. Specialists usually have been Machinists before they are promoted. The manager trains new Specialists when they are moved up.

Just like the Machinists, the Specialists arrange the materials in the bin and put them together to make the product. As the Specialists put the product together, they check for the quality of the materials used. After they have made the product, the Specialists check the product to make sure it’s okay. They check to make sure the product has been made just like the print said. If everything checks out, the Specialists “finish” the product by smoothing any rough edges.

Specialists must fill out a detailed record of the number of hours worked on each order. Specialists must also record what they did on each order on the materials card and attach the card to the finished product. The Specialists must be very careful in filling out the proper forms and keeping correct records because these are products that have not been produced before. There are no financial records to check to see what costs have been in the past. The time cards are given to the manager each week and the materials cards are given to him when the orders are finished. The manager adds up the numbers for all workers.
Specialists are also expected to keep neat, safe, and orderly work stations. Tools, equipment, materials, and work in progress must be put away and stored at the end of each work day. All Specialists look over the entire work area for any safety risks, then they report any risks to the manager as soon as possible.

Now this is the end of the job preview part of this video. Next I’m going to ask you a few simple questions to see what you thought about these jobs. You may look at any notes if you took them. Please answer only based on what you think. Do not ask someone else or look to see what they are answering. We want your answers. Remember that this is not a job offer and there are no “right” answers that will make us give you a job. There are no “wrong” answers that will make you lose a job. We just want to know what you think about these jobs.

Get your answer sheets again. Make sure you have your pencils. If you need help ask the helper.

I’m going to ask you three simple questions. After I have read the question, I will carefully go over each answer.

Question 15: First, I want to make sure that we have made it clear that you know that we are not offering you a job. We only need to know what you think. If you know that we are not offering you a job please circle NOT FOR A JOB.

Question 16: Think about the Starter’s job we showed you. This is the one who gets all of the materials together. Do you think you could do the Starter’s job? If you think you can do the Starter’s job mark: I CAN. If you think you cannot do the Starter’s job, mark: I CANNOT. Now, if you answered I CAN, I need you to tell me one more thing. This is only if you answered I CAN. If you answered I CAN, then guess for me, how many times out of 10 tries could you do the Starter’s job with no mistakes? Write your number on the line beside I CAN.

Question 17: Now think about the Machinist’s job. This is the one who puts together orders for more than 100 pieces and do similar things over and over. Remember, Machine Molding trains all of the workers to know how to use the machines the Machinists use. Do you think you could do the Machinist’s job? If
you think you can do the Machinist’s job mark: I CAN. If you think you cannot do the Machinist’s job, mark: I CANNOT. Now again, only if you answered I CAN, tell me how many times out of 10 tries could you do the Machinist’s job with no mistakes? Write your number on the line beside I CAN.

Question 18: Finally, think about the Specialist’s job. This is the one who makes the products that have never been done before. Do you think you could do the Specialist’s job? If you think you can do the Specialist’s job mark: I CAN. If you think you cannot do the Specialist’s job, mark: I CANNOT. Only if you answered I CAN, please tell me how many times out of 10 tries could you do the Specialist’s job with no mistakes? And again, write your number on the line beside I CAN.

Thank you very much. You have now finished the second part of the study. Next I’m going to show you another way that Machine Molding may plan the jobs in the tool and die shop, known as the Tool & Die shop. We will again see the starter, machinist, and specialist jobs, but remember, this time they will be done differently. The first part of the next video will be the same as before but the rest of the video is entirely different from the last one. Watch carefully and feel free to take notes.

Video Preview Two

Participative team. Ladies and gentlemen welcome to Machine Molding Incorporated’s job preview. I’m Shawn Wyatt and I’ll be your host for this look at what could be a career with America’s largest maker of precision metal products for most any application. I’ll show you potential jobs at Machine Molding. We are not offering you a job, we just want to know what you think about the jobs we will show you. We want to know what you think so we can make our jobs so our workers can do their best work.

Machine Molding has been in business since 1953. We have two plants and employ over 500 people. We do not have a plant in West Tennessee right now. We specialize in making many different types of metal moldings that are used by other companies to make thousands of products. No job is too large or small for us to tackle.
The company has several divisions that work in the plant. The division I’ll show you is the tool and die shop, we call it the Tool & Die shop. Please watch the video carefully. Feel free to take notes. You will be asked a few questions following this video. Thank you for helping us.

**The Tool and Die Shop**

The people working in the Tool & Die shop are divided into self-managed work teams. Each team has three to seven members. The members all work together to make the products. There is no manager, but each team has a team leader. The team leader is just like any other team member unless something happens where he has to do something different. All team members do almost everything the manager had been doing. Team members decide the pace of the work, work tasks, and how to check products for quality. The team also rates the work of all of the team members. The team controls all the things that happen in the Tool & Die shop. Team members work to keep each other up-to-date on rules that would affect the way products are put together. Team members train each other on each step of a new job and make sure all members understand what they are to do.

There are three types of teams in the Tool & Die shop: a Starter team, a Machinist team, and a Specialist team. Each team does a job that is different from the other teams, but they are related. The Starter team is the first team to work on an order. It is the simplest job in the shop. The Starter team gets the materials together and ready for new orders. Then either the Machinist team or Specialist team will finish the order. The Machinist and Specialists teams do tougher jobs than the Starters. Most new employees are put on the Starter team first.
The Tool & Die shop gets different types of orders. Sometimes the shop gets orders for products they have made before. These orders are usually easy to make because they’ve been done before. The Machinist team makes these. These orders are usually for large runs, orders for 10 up to 500 pieces. Sometimes the Tool & Die shop gets orders for products it has never made before. The Specialist team makes these products.

The Starter Team

The Starter team gets all of the materials needed to fill the orders. The Starter Team begins every morning with a team meeting. During this meeting the team gets any new orders. The orders sometimes come from Machine Molding’s own engineering department. Our engineers draw up a plan on a blueprint, we call them “prints.” This print shows the Tool & Die shop what to build. Other times the orders come from the customer’s engineers or architects who have drawn the prints.

Once the Starter Team has the order, it makes a list of all the parts and materials needed on a materials card. The materials card shows the parts’ stock numbers so you can match it with the part you need. The card also has exact measurements for the materials. Sometimes these may need to be cut to fit the order.

The team goes over anything odd about the parts or instructions and figures out the answers to any questions team members have. The team then divides the daily orders and gives orders to each member to fill. Some orders are filled by Starter members working together.

The Starter members take the order to the materials area and get the materials needed. They find the exact parts by matching the parts’ names and numbers on the card.
to the parts’ names and numbers on the bins. They mark the item off on the materials card after they get it. When they have all the materials, they cut the materials to the size they’re supposed to be. After they make the cuts, they mark the materials card. Finally, the Starter team puts all of the materials into the holding bins with the materials card attached to show that all parts are there and cut to order. The Starter team then must decide if the order should be given to the Machinist or Specialist team to make the product.

The Starter members watch how many parts and materials are left as they fill orders. When a Starter sees they are almost out of an item, he makes a note on an inventory card and puts it in the order tray. Starter team members order everything they need and deal with all the suppliers. Members are responsible for knowing how many parts and materials they have, taking bids on large orders, selecting companies to buy from, recording parts that come in, and putting the parts and materials on the shelves.

The team also watches the quality of the materials they buy and use to make sure the quality is good enough for each order. Starter members must know the quality standards that are needed. The team makes regular quality checks. If a team member sees something wrong, the team talks about the problem as soon as possible so they can solve it.

Starter members must fill out a time report of the number of hours worked on each order. This is important for the company to know how much to charge for each order. The team gets all time reports at the end of the week. The team adds up all the hours for each team member and sends a report to the billing department.
Starters must keep work stations neat, safe, and orderly. Tools, equipment, materials, and work in progress must be put away at the end of each work day. All Starters look over the entire area for any safety risks. Any risks will be discussed with the team at the next team meeting. Teams will come up with ways to solve problems and will decide how to make changes.

The team will go over all mail or calls coming into the Tool & Die shop from anyone such as customers, suppliers, regulators, the Human Resource Department, and other departments inside Machine Molding. This is important because sometimes the government adds new rules on materials or procedures used by the Tool & Die shop. Any letters or calls made to someone outside the Tool & Die shop will be talked over and written by the team.

**The Machinist Team**

The Machinist team makes the products for big orders. These orders are made just like the customer asks for them. Most of the time the order will be the same as the Machinists have made before.

Orders go to the Starter Team first. They get all the materials that are needed and then give the order to the Machinist Team or the Specialist Team. Each order has a detailed plan of what the customer wants on the print. At the morning meeting, the Machinist Team will go over the work for that day. The team looks at the prints and decides how each order should be made and who should make it. The team makes sure all Machinists understand how to make the product.

Sometimes the order will be small and one Machinist can make the whole thing by himself. Most of the time, the order will have to be made by several Machinists.
working together. The order may be passed from person to person until it is done. The team members decide together which work station each Machinist will work when a new order is started. For orders that may take several days to fill, members may rotate positions. This means each team member has to know every step in making the product.

Machinists sort the materials in the bin and put them together the way the team decided to make the product. Machinists check the quality of the materials as they make the product. After they have made the product, the Machinists will test the product to make sure it’s okay. They check to make sure the product has been made just like the print said. If everything checks out, the Machinists “finish” the product by smoothing any rough edges.

Sometimes the Machinists may have trouble making the product. This happens more when they make something for the first time. A Machinist tries to solve the problem by himself if he can. If he can’t solve it by himself, the Machinist Team meets to look over the problem. The team works together to fix the problem and makes sure everyone knows how to solve the problem. Machinists take turns showing the team how to do the hard parts of making an order. The team also trains new Machinists when they are moved up and all Machinists are fully trained so they know how to use the all the machines.

Machinists fill out a time report of the number of hours worked on each order. The company needs to know this so they know how much to charge the customer. The team will get all of the time cards at the end of each week. The team adds up all of the numbers and sends a report to the accounting department.

Machinists also have to write down what they did on each order on the materials card. The team gets the materials cards when the orders are done. The team makes a
report each month that checks the cost of each product made against what the company thought it would cost to make it. The team must try to stay within the cost limits set up by the company. The team decides together what they must do to stay within these cost limits.

Machinists must keep neat, safe, and orderly work stations. Tools, equipment, materials, and work in progress must be put away at the end of each work day. All Machinists look over the work area to see if they see any safety problems. The team will talk about any problems and come up with ways to solve them at the team meeting.

The team keeps up with all calls or mail coming into the Tool & Die shop from anyone such as customers, suppliers, regulators, the Human Resource Department, and other departments inside Machine Molding. This is important so they can keep up with any new government rules on materials or methods used by the Tool & Die shop. Any letters or calls made to someone outside the Tool & Die shop will be talked over and written by the team.

**The Specialist Team**

The top team in the Tool & Die shop is the Specialist Team. The Specialists get the toughest orders that come in. Most of these are small orders for 1 to 50 pieces. Most of the products the Specialist Team makes will be brand new. No one has ever made them before. Customers order these products for things they will only need once. For example, the Specialist Team has made special valves for Marine customers and special tools for surgery in the Medical field. This is the top team in the Tool & Die shop.
As we said before, orders go to the Starter Team first. They get all the materials that are needed. Then the Starters send the order to the Machinists or Specialists. Orders that have not been made before are all given to the Specialist Team. The Specialist Team carefully looks over the prints they get from the customer to see what needs to be done.

Most of the time Specialists make brand new products that have to have new ways to make products. The orders will almost always be hard to do so no one else can make them. The team goes over each order and works together to come up with the way to make the product. The team then goes over the instructions on how to make the product. There is a lot of talk between the members of the Specialist Team especially when they’re just starting a new order. They may try to do it many times before they find the best way to make it. The team goes over all problems and changes to make sure all Specialists know the latest changes.

The Specialist and Machinist Teams are a lot alike, but the Specialists won’t make the same things as much as the Machinists. Specialists have to figure out new ways to make things more than any other team. The Specialists may have to try things on their own to see what works and then tell the team about it.

Specialists should know and understand the rules of making the product. Specialists must know how to find how much the materials can handle. Specialists will also need to know what materials can be used together and which ones can’t. Specialist team members are normally promoted from the Machinist team. The team trains new Specialists when they are hired.

Just like the Machinists, the Specialists organize the materials in the bin and put them together using the instructions written by the team to make the product. After they
have made the product, they test the product to make sure its okay. They check to make sure the product has been made just like the print said. If everything checks out, they “finish” the product by smoothing any rough edges.

The Specialist Team is responsible for filling out a detailed report of the number of hours worked on each order. Specialists also record the procedures done on each order on the materials card and attach the card to the finished product. The Specialists must be very careful in filling out the right form and keeping good records. Reports need to be correct with no errors. Since these products have not been made before, there are no records to check to see how much it costs to make the products before. The team gets the time cards at the end of each week. The team will add up all the hours spent working on each order. The team will also add up all materials that are used on each order. The team will give these to the Accounting Department.

Specialists must keep neat, safe, and orderly work stations. Tools, equipment, materials, and work in progress must be put away at the end of each work day. Each Specialist is asked to look over the work area to see if they notice any safety risks. Any risks should be discussed with the team at the next team meeting. The Team works together to come up with ideas on how to solve problems and will decide together how to make changes.

The team goes over all mail or phone calls coming into the Tool & Die shop from anyone such as customers, suppliers, regulators, the Human Resource Department, and other departments inside Machine Molding. This is important to keep up with any new government rules on materials or methods used by the Tool & Die shop. Any letters or
other contact with those outside the Tool & Die shop are talked over and written by the team.

Now this is the end of the second job preview. Next I am going to ask you one last set of questions. I want to know what you thought about the jobs you have just seen. Please answer the questions based on what you think. Don’t ask anyone or look to see what they are answering. We want your answers. There are no “right or wrong” answers. We just want to know what you think. So get your answer sheets. Make sure you have your pencils. If you need help ask the helper.

I will ask you the question and then go over each possible answer just as we have before.

Question 19: Do you understand that what we are currently doing is not for a job? If you think this might be for a job please mark: A. for a job. If you think this is not for a job please mark B: not for a job.

Question 20: Think about a job on the Starter Team we showed you. That’s the team that gets all the materials together. Do you think you could do the job of a Starter Team Member? If you think you can do the job of a Starter Team Member mark: I CAN. If you think you cannot do the job mark: I CANNOT. If you marked, I CAN, then tell me how many times out of 10 tries you think you could do the Starter Team job with no mistakes. Write the number of times on the line beside I CAN.

Question 21: Next, think about a job on the Machinist Team. The team that makes big orders and makes the same things a lot. Remember the Machinists are trained to know how to use the machines. Do you think you could do the job of a Machinist Team Member? If you think you can do the job of a Machinist Team member mark: I CAN. If you think you cannot do that job, mark: I CANNOT. If you marked, I CAN, then tell me how many times out of 10 tries you think you could do the Machinist Team job with no mistakes. Write the number of times on the line beside I CAN.

Question 22: Now, think about a job on the Specialist Team. The team that makes small orders and hardly ever makes the same things twice. Do you think you could do the job of a Specialist Team Member? If you think you can do the job of a Specialist Team member mark: I CAN. If you think you cannot do that job, mark: I CANNOT. If you marked, I CAN, then tell me how many times out of 10
tries you think you could do the Specialist Team job with no mistakes. Write the number of times on the line beside I CAN.

Question 23: Now I want you to think back over both videos that you have seen. One showed you jobs that had a manager to help you do the job, the other showed teams working together to do the job. If you could have a job on one of these which one would you want? If you would want a job where you had a manager circle: MANAGER. If you would want a job on a team mark: TEAM.

Question 24: This is the last question. Please take some time to think about this question. Think about all of the jobs you have seen, ones with bosses and the ones on teams. I want you to tell me how much I would have to pay you per hour to get you to take each one of the jobs you have seen. I’ll start with the jobs that had a manager. What hourly pay would you have to get to take the job of Starter with a manager? What hourly pay would you have to get to take the job of Machinist with a manager? What hourly pay would you have to get to take the job of Specialist with a manager? The next three jobs are on teams. What hourly pay would you have to get to take a job on the Starter Team? What hourly pay would you have to get to take a job on the Machinist Team? What hourly pay would you have to get to take a job on the Specialist Team?

Question 25: Have you ever had a job working with any of the machines from a tool and die shop? Yes or No.

Question 26: Did you understand the whole time that you were part of a study and not an interview for a job? Yes, I did understand or No, I did not understand.

Question 27: At any time during the session did you begin thinking that this might lead to a real job with Machine Molding? Yes or No.

It is important to us that you do not feel you were told any lies or led to believe something that was not true. This is the end of our session. Please give your answer sheets to the assistant in the room. Thank you very much for letting us know what you think about our jobs. We wish you the best in the future.
Appendix B: Survey Instruments

Please Print Your Name: ______________________

Machine Molding Incorporated
Job Preview Questions

We want to find out how we can plan our jobs so our workers can do their very best. Thank you for helping us in our study. This is NOT a job interview. We will not be hiring anyone. We only want to know what you think about our jobs.

Is it clear to you that this is NOT a job interview or a job offer in any way?

_____ Yes, I know this is not a job offer
_____ No, I think this may be for a job

About You

What is your sex?  _____ Male  _____ Female

What is your race?  _____ Black  _____ Hispanic  _____ White

How old are you?  _____

Do you have a High School Diploma, GED, or College Degree?

_____ No, I do not have a Diploma or GED
_____ Yes, I have a High School Diploma
_____ Yes, I have a GED

_____ Yes, I attended College
_____ Yes, I have a College Degree

Are you currently working?

_____ I’m not working now
_____ I have a full time job
_____ I have a part time job

Have you ever had a job where you were on a team?

_____ Yes, I have been on a team at work before
_____ No, I have never been on a team at work before

About Work

When you have been asked to read but had trouble, did you talk to your friends or your boss about it?

_____ 0 Never
_____ 1 A few times
_____ 2 About half the time
_____ 3 A lot
_____ 4 Always

MMI #IN134LO
When you have been asked to read but had trouble, did you get someone to help you read it?

_____ 0 Never
_____ 1 A few times
_____ 2 About half the time
_____ 3 A lot
_____ 4 Always

When you have been asked to read but had trouble, did you try to think about good things to take your mind off the reading?

_____ 0 Never
_____ 1 A few times
_____ 2 About half the time
_____ 3 A lot
_____ 4 Always

When you have been asked to read as part of your work but had trouble, did you try to pass the work on to someone else?

_____ 0 Never
_____ 1 A few times
_____ 2 About half the time
_____ 3 A lot
_____ 4 Always

When you have been asked to read but had trouble, did you just try not to worry about it?

_____ 0 Never
_____ 1 A few times
_____ 2 About half the time
_____ 3 A lot
_____ 4 Always

When you have been asked to read but had trouble, did you try to get away from reading or try to avoid reading?

_____ 0 Never
_____ 1 A few times
_____ 2 About half the time
_____ 3 A lot
_____ 4 Always

M=__________  R=__________

MMI #IN134LO
Machine Molding Incorporated
Job Preview Questions

Starter Team
Can you do the job of a Starter Team Member?

_____ A. I can
_____ B. I can not
If you answered YES, how many times out of 10 tries could you do this job with no mistakes? __________

Machinists Team
Can you do the job of a Machinist Team Member?

_____ A. I can
_____ B. I can not
If you answered YES, how many times out of 10 tries could you do this job with no mistakes? __________

Specialists Team
Can you do the job of a Specialist Team Member?

_____ A. I can
_____ B. I can not
If you answered YES, how many times out of 10 tries could you do this job with no mistakes? __________

General Questions
If you could have either type job you have seen, which would you choose?

_________ Manager _________ Team

What hourly wage rate would it take to get you to take each of the jobs you have seen?

Starter’s job with a Manager $_________ Starter Team job $_________
Machinist’s job with a Manager $_________ Machinist Team job $_________
Specialist’s job with a Manager $_________ Specialist Team job $_________

Have you ever worked with any of the machines in a tool and die shop?

_________ Yes, I have worked with the machines
_________ No, I have not worked with the machines

Did you understand that this is a study and not an interview for a job?

_________ Yes, I knew this was NOT for a job
_________ No, I thought this was for a job

Did you ever begin thinking that this might lead to a job with MMI?

_________ Yes, I thought it might get me a job
_________ No, I understood it was NOT for a job
Machine Molding Incorporated
Job Preview Questions

I understand that what I am doing now is

A. For a job
B. NOT for a job

Starters Job
Can you do the starter's job?

A. I can
B. I can not

If you answered YES, how many times out of 10 tries could you do this job with no mistakes? ______

Machinists Job
Can you do the machinists's job?

A. I can
B. I can not

If you answered YES, how many times out of 10 tries could you do this job with no mistakes? ______

Specialists Job
Can you do the specialist's job?

A. I can
B. I can not

If you answered YES, how many times out of 10 tries could you do this job with no mistakes? ______
Please Print Your Name: __________________________

**Machine Molding Incorporated**
**Job Preview Questions**

We want to find out how we can plan our jobs so our workers can do their very best. Thank you for helping us in our study. This is NOT a job interview. We will not be hiring anyone. We only want to know what you think about our jobs.

Is it clear to you that this is NOT a job interview or a job offer in any way?

____ Yes, I know this is not a job offer
____ No, I think this may be for a job

**About You**

What is your sex? 
___ Male  ___ Female

What is your race? 
___ Black  ___ Hispanic  ___ White

How old are you? ______

Do you have a High School Diploma, GED, or College Degree?

____ No, I do not have a Diploma or GED
____ Yes, I have a High School Diploma
____ Yes, I have a GED
____ Yes, I have attended College
____ Yes, I have a College Degree

Are you currently working?

____ I'm not working now
____ I have a full time job
____ I have a part time job

Have you ever had a job where you were on a team?

____ Yes, I have been on a team at work before
____ No, I have never been on a team at work before

**About Work**

When you have been asked to read but had trouble, did you talk to your friends or your boss about it?

____ 0 Never
____ 1 A few times
____ 2 About half the time
____ 3 A lot
____ 4 Always
When you have been asked to read but had trouble, did you get someone to help you read it?

   0 Never
   1 A few times
   2 About half the time
   3 A lot
   4 Always

When you have been asked to read but had trouble, did you try to think about good things to take your mind off the reading?

   0 Never
   1 A few times
   2 About half the time
   3 A lot
   4 Always

When you have been asked to read as part of your work but had trouble, did you try to pass the work on to someone else?

   0 Never
   1 A few times
   2 About half the time
   3 A lot
   4 Always

When you have been asked to read but had trouble, did you just try not to worry about it?

   0 Never
   1 A few times
   2 About half the time
   3 A lot
   4 Always

When you have been asked to read but had trouble, did you try to get away from reading or try to avoid reading?

   0 Never
   1 A few times
   2 About half the time
   3 A lot
   4 Always

M=   R=   

MMI #TM234LO
Machine Molding Incorporated  
Job Preview Questions

**Starter Team**
Can you do the job of a Starter Team Member?

_____ A. I can
_____ B. I can not

If you answered YES, how many times out of 10 tries could you do this job with no mistakes? ________

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**Machinists Team**
Can you do the job of a Machinist Team Member?

_____ A. I can
_____ B. I can not

If you answered YES, how many times out of 10 tries could you do this job with no mistakes? ________

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**Specialists Team**
Can you do the job of a Specialist Team Member?

_____ A. I can
_____ B. I can not

If you answered YES, how many times out of 10 tries could you do this job with no mistakes? ________

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MMI #TM234LO
Machine Molding Incorporated
Job Preview Questions

I understand that what I am doing now is

A. For a job
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Starters Job
Can you do the starter’s job?
A. I can
B. I can not
If you answered YES, how many times out of 10 tries could you do this job with no mistakes?

Machinists Job
Can you do the machinists’s job?
A. I can
B. I can not
If you answered YES, how many times out of 10 tries could you do this job with no mistakes?

Specialists Job
Can you do the specialist’s job?
A. I can
B. I can not
If you answered YES, how many times out of 10 tries could you do this job with no mistakes?

General Questions
If you could have either type job you have seen, which would you choose?
Manager
Team

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