



### A new workforce training and development program for the Mississippi furniture industry

Mississippi State University's Institute of Furniture Manufacturing and Management announced a new workforce training and development program for the Mississippi furniture industry.

Funded by a \$496,000 grant from the Department of Labor, the program is designed to help the furniture industry stay competitive in an increasingly intense global environment.

Mississippi has lost nearly 4,000 furniture manufacturing jobs in the last decade. Countries such as China enjoy several cost advantages over U.S. furniture manufacturers including low wage rates, fewer environmental and government regulations, and lower costs for expansion. As these countries continue to improve product quality and reduce transport times, the threat to U.S. manufacturers will intensify.

In order to effectively compete in today's environment, the furniture industry must make gains in product quality, production efficiency, and service.

The workforce training and development program is anticipated to improve employee attitudes, create higher retention rates and lessen absenteeism, as well as improving employee efficiency.

The improved efficiencies will enable expansions and increased productivity resulting in more jobs and a higher income earning potential for employees with improved skills.

The program will be conducted by personnel in MSU's Institute of Furniture Manufacturing and Management, Itawamba Community College's Workforce Development and Training and WIA Programs, WIN Job Center and the Community Development Foundation.

Training will offered in soft skills, ergonomics, employee health promotion, and computer skills. The soft skills training includes communication, leadership/motivation, teamwork, goal setting, problem solving, and supervisory skills. The computer training includes computer literacy, Web navigation/E-mail, and Microsoft Office applications.

Training courses will be held either at company sites, the ICC's Advanced Education Center in Tupelo, or County WIN Centers. Training will be provided on a first-come-first-serve basis over a two year period.

If you are interested in participating, please contact Amy Garrard at 662.325.8453 or by e-mail at [agarrard@cfr.msstate.edu](mailto:agarrard@cfr.msstate.edu).

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# MBA field study projects: A glimpse at the real world

*Fawad Shah, MBA/MSBA President*

MBA students at Mississippi State are solving real world problems for organizations while earning graduate credit as part of the program's required strategy field study. The capstone course is designed to provide graduating students with an opportunity to use the skills developed in the classroom to solve a problem faced by a selected organization. Nearly 100 projects have been successfully completed since the MBA program was redesigned in 1996 to include this hands-on business experience. Students have participated in projects ranging from production design plans, market research, customer service, worker motivation, and technology improvements.

After the students have collected data, analyzed the problem, and developed recommendations, the group makes a final presentation to a panel of faculty members and representatives from the client organization.

The field study projects have met with wide approval by participating organizations, including both profit and non-profit organizations. The projects have a 99-percent success rate, according to Garry Smith, Chair of the Department of Management and Information Systems, who works closely with student groups in completing their projects.

"On more than one occasion, clients have asked students if they need a job, which is a pretty good indication that they were very pleased with student performance," Smith said.

The participating organizations have been very complimentary of the program, students, and recommendations.

"The students' recommendations contributed tremendously by making us aware of the need to restructure incentive plans designed to attract new businesses to Mississippi," said John Rucker, Executive Director of the Oktibbeha County Economic Development Authority.

"The projects are a challenge for students and faculty alike," says Barbara Spencer, Director of Graduate Studies in Business. "Unlike some classroom assignments, we can't afford to have poor results here. When businesses come to us with problems to solve, we do everything in our power to provide them with clear conclusions, fresh insights, and usable recommendations. This program gives us a chance to interact with the business community, and we see it as a real opportunity to demonstrate our skills. As a result, the businesses benefit, and so do we."

## MBA TEAMS ASSIST FURNITURE

Two MBA teams are assisting the furniture industry. One team is developing a market penetration strategy for a new furniture product aimed at 18-29 year olds, especially entering college freshmen and young adults. The study includes product costing, market acceptance, pricing strategies, selling and distribution channels and target market penetration recommendations. Another team is developing and administering an assessment of current satisfaction levels for a Mississippi upholstered furniture company. The survey will question retailers on specific items related to product, price, service, delivery, and financial procedures. Results will reveal dealer satisfaction levels and the team will make recommendations to better fulfill expectations and improve manufacturer/dealer relations with the overall goal of doing more business.

# The role of the designer in shaping the Mississippi furniture industry

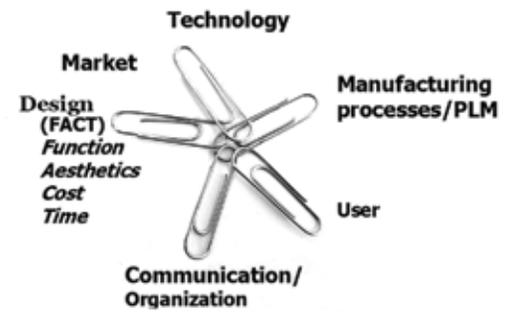
Shilpi Kumar

Changing needs, desires of comfort, perceptions of consumers have led to a distinct improvement in the design of both products and architecture.

Industrial design (ID) is a profession of collaboration; practicing interdisciplinary design methods for problem solving. Prior to the 18th century, production was dependant on the craftsmen and artisans who often made the products by hand. This changed with the development of the industrial system and mass production, specialization of labor and the emergence of middlemen. Today an interdisciplinary approach with teams of engineers, material purchase experts, research and development, design, marketing and other specialists is critical to the development of products and services.

Designers and architects are trained to appreciate architectural spaces, interior layouts, color and forms. Equally important is an understanding of how to involve systematic thinking in the design process through a formal decision making procedure with the ultimate goal of adding value and improving the perceived value and price of the products among the buyers. Considering consumer characteristics is an integral part of the design process. We can now say that design is much more than making products look good—a common misconception amongst people in general.

Design is a description of how an object shall look, how it should feel to handle, how it should work etc. This description is an outcome of



design research which includes user study, market research, parallel product research etc. In this whole process of product design and development industrial design typically involves manufacturing of large series of products that will be used by a large mass of common people.

Hence a designer has to plan the product development process with the aim of making it as effective as possible within the defined (FACT) Function, Cost, Aesthetics and Time.

It is time for the Mississippi Furniture manufacturers to realize the importance of deploying research and design in-house. Manufacturers must realize that the emphasis on industrial design will in the long term prove to be more rewarding than isolated attempts of reducing cost or increasing market share.



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**Sustaining Competitive Advantages for  
the Furniture and Cabinet Industries**

Technical Session

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Presentations include:  
Preparing for future changes in the workforce  
Transportation issues impacting the forest products industry  
The furniture industry: Partnering with your retailers  
The cabinet industry: Focus on the customer-expectations of today's consumers



## The hidden costs of outsourcing

*Zi Wan, Steve Hunter, and Amy Garrard*

Outsourcing, this word comes up more and more often in discussions related to furniture and furniture component manufacturing in Mississippi. According to Merriam-Webster, outsourcing is, “The practice of subcontracting manufacturing work to outside and especially foreign or nonunion companies.” Many Mississippi companies are following the example of the North Carolina furniture industry and developing outsourcing strategies with off shore countries. Even some companies that have formerly resisted participating in outsourcing are reconsidering the strategy because of intense pressures to reduce costs. Perceived advantages of outsourcing products and components from low-wage countries include much lower labor costs; lower construction, expansion and operating costs; and fewer environmental and government regulations and requirements. Additionally, market acceptance, improvements in quality of products and decreases in transportation costs and shipping times point toward continued increases in the practice of outsourcing to low wage countries.

Outsourcing has become one option for remaining competitive. However, in an environment of intense competition, it is extremely important for manufacturers to quantify the entire costs associated with low wage outsourcing. Full knowledge of the hidden costs and risks associated with outsourcing allows manufacturers to make fully informed decisions on strategy development for achieving and maintaining global competitiveness.

A study is being conducted at Mississippi State University’s Institute of Furniture Manufacturing and Management with the goal of identifying all potential costs and risks associated with outsourcing and assessing the economic impact of these costs. This research does not seek to promote a position on outsourcing but rather to make an objective appraisal of costs and risks associated with the

practice of outsourcing. A careful literature review identified perceived costs and risks associated with outsourcing furniture from low-wage countries. Beyond the obvious issues of transportation costs, language barriers, and cultural differences, many other issues were identified. Some of these potentially problematic areas were bureaucratic and governmental complications, legal system issues, business and manufacturing practices, ethics, quality issue costs, global complexities, quality control, and transportation and scheduling problems. From these potential costs, a series of surveys were developed by MSU researchers Steve Hunter and Zi Wan. The first survey was targeted toward Mississippi furniture and component manufacturers and copies of this survey have been hand-delivered to about 100 companies in the state. Researchers have been able to conduct personal interviews with management at about 40 of these companies. The second survey seeks to gather information from manufacturers of wood and upholstered furniture and wood component manufacturers all over the nation but especially in the southeastern region of the U.S. The third part of the study will gather information from manufacturers of furniture and components with at least one year of experience exporting furniture and wood components to the U.S. furniture market and China.

Data from these surveys will be summarized, analyzed, and results will be distributed through industry publications and news releases. The results from this study will provide furniture and related manufacturers with a more comprehensive assessment of the total costs of outsourcing so that decision makers can make more informed and knowledgeable strategy decisions. If you would like to participate in this study and have not been contacted by IFMM researchers, please contact Amy Garrard at 662.325.8453, E-mail: [agarrard@cfr.msstate.edu](mailto:agarrard@cfr.msstate.edu).

# Computer simulated performance testing of sofa frames

*Li Dai and Amy Garrard*

Developing a computer model to simulate GSA performance test on sofa frames is the focus of a research project headed by Jilei Zhang and conducted by graduate research assistant Li Dai in the Institute of Furniture Manufacturing and Management. The purpose of the project is to improve product reliability in service and minimize material costs in production. Once complete, performance testing of sofa frames to GSA standards using Finite Element models instead of actual physical testing of the frames will be possible. The research project is divided into four stages: 1) General Service Administration (GSA) performance tests on the whole sofa frames; 2) Mechanical strength tests on components; 3) Develop Finite Element (FE) models; 4) Improving the prototypes. Stages 1 and 2 are complete and work has begun on Stage 3.

Six sofa frames were provided by a Mississippi producer of upholstered furniture for stage 1. The sofas were numbered as Frame #1 to Frame #6, and GSA tests were performed on each sofa frame. Testing results and failure modes were recorded by means of pictures and/or videos. In order to compare with GSA tests—which are based on cyclic fatigue load—corresponding static load tests were also performed on the frames. Stage 2 of the project consisted of performing tests on the sofa component parts. Samples were cut from plywood sheets to perform static bending tests to obtain the mechanical strength properties of the material used for constructing the frames, such as Modulus of Elasticity (MOE) and Modulus of Rupture (MOR). Based on the parameters derived from the static bending tests, dimensions of the members for light, medium, and heavy duty use were calculated, and samples were cut from plywood sheets. These samples were tested under cyclic loading schedules. These results will be used to verify the theoretical derivation. In addition to the tests on members, mechanical tests on joints connected by glue will be performed in the future. This will allow researchers to study the strength of glued joints compared with that of stapled joints, on which test data already exists. The influence of different factors, such as grain directions and load directions, to the strength of joints will also be examined in order to recommend measures that can be taken to strengthen the joints in real production.

In Stage 3 of the project, computer simulation will be performed. Finite element models will be developed to

provide insight into the stress distribution within the frame when it is loaded. The modeling analysis results yield force schedules for joints and moment schedules for members, corresponding to each loading level of applied GSA load levels. Finally, frame member sizes and joint static strength properties required can be determined based on force information and available fatigue study results. The ultimate goal is to develop a sofa frame design manual, which includes information such as the procedure for designing critical joints and members of a sofa frame using available structural analysis tools and based on experimental study results to satisfy GSA furniture performance test requirements, i.e., considering fatigue effects.

The final stage of this project will be to make frame improvements based on design targets and analysis data to achieve maximum performance/cost ratio. At the end, a design manual including procedures for designing critical joints and members of a sofa frame, the commonly used joint types and their strength properties, and various engineered wood composite properties, will be developed. This manual will enable furniture manufacturers to achieve significant cost savings through product engineering and reengineering.



# Sustaining competitive advantages for small furniture companies

Amy Garrard

In this series of articles we have looked at how improving employee satisfaction can lead to increased productivity and product quality as well as greater cost efficiencies and fewer defects. The importance of leadership within the company was discussed in Volume 4, Issue 2 of Furniture Highlights and the importance of employee training was explored in Volume 5, Issue 1 of Furniture Highlights. The third strategy that will be examined is employee motivation.

What is a company's most valuable asset? Many CEO's would answer "My people". But do they really believe that their employees—from the line workers to the vice presidents are the keys to outstanding company performance? Many CEO's invest millions in new technologies, state-of-the-art equipment, and computer systems and software—but how many are willing to invest in improving the attitudes, morale, and motivation of their employees? A lack of attention paid by managers to motivating workers may be related to the difficulty of measuring motivation. Determining what makes people do what they do is a very inexact science. Further complicating the issue, because people are all individuals with their own sets of needs, desires, problems, attitudes, values, personalities, and backgrounds, what works to motivate one worker may or may not motivate others. Also, factors such as stage of life cycle, crises, or financial situations of employees will have an effect on the success of various motivation strategies at any given time. Many studies have shown that contrary to what most top managers believe, employees value personal attention, appreciation and recognition above almost everything else, and most have a real desire to contribute to the success of the company. According to Bill Sims, a motivation and recognition consultant, it appears that the role of effective management is shifting from an old school, authoritative, controlling management style to one in which the best managers are coaches, colleagues, counselors, and ad-

vocates for employees. This article will define motivation as it relates to the work environment and explore how motivating employees can contribute to organizational success especially in today's global environment. Methods to improve morale and motivation, especially in small to medium sized companies, will also be identified.

## Motivation – What is it?

Motivation comes from the Latin word *movere* which means "to move". Motivation has been defined as an external influence, or anything that causes individuals to act. Motivation is emotional, it is a will, a positive incentive, an inspiration, a driving force, a stimulus, or desire to move forward. In short, motivation is an emotion that causes action.

## Why is motivation so important?

Why should managers strive to improve motivation and employee attitude? Because every available tool is needed to help companies compete in today's hyper-competitive global marketplace. Studies show that employees who feel valued by management and other co-workers work harder, smarter, and longer resulting in higher productivity, improved product quality, and decreased costs for the company.

## So, What works?

Would you be surprised to learn that money is not the best motivator? Most managers believe that money is the top motivator for their employees. Of course wages/salary is an important element of every job because it allows one to fulfill the needs basic to survival. Money allows one to maintain or improve their standard of living and the motivational importance of money will vary by worker over time and by individual circumstances. However, many studies show that money is not a good way to sustain motivation over time. Bob Nelson, founder and president of Nelson Motivation, Inc., a management training and consulting firm based in San Diego says that "salary raises and bonuses are nice, but they seldom motivate people to do their best on the job on an ongoing basis." Another authority, Scott Miller, of Kirk Miller, Associates agrees that as long as we are paid competitively, or even close to competitively, the money issue is not the deciding factor in whether we remain at a job and how enthusiastically and competently we do that job.

## MOTIVATION GUIDELINES

1. **Personally thank them** for a specific job well done.
2. Put that specific praise in a letter or **thank-you note**.
3. **Provide as much information** as possible about the company.
4. **Include employees** in decisions when possible.
5. Provide employees with the **opportunity to learn new skills**.
6. **Celebrate successes**.
7. Provide **free time and flexibility**.

*Scott Miller; Kirk Miller, Associates*

So, if money is not the best motivator for the workforce, what is? The answer appears to be rather simple and relatively inexpensive. Employees want to be valued for a job well done. They want to be recognized and rewarded for their contributions. Frances Hesselbein, president of The Drucker Foundation, says that people want to feel what they do makes a difference and that personal recognition, no matter what its form, does. In a study by Gerald Graham, Wichita State University, employees ranked 65 potential motivational incentives. The incentive ranked most important by respondents was “personalized, instant recognition from managers, a letter of praise for good performance was ranked second.” Other studies show that open communication and respect are at the top of the list of motivating factors. Motivation within a company should be systemic—meaning it flows throughout the organization in all directions. This is why the organizations compensation and performance systems should be aligned with a company’s motivational activities. Motivation starts with showing appreciation for a job well done, treating workers with respect, and keeping them informed about what is going on in the company.

### What Motivation is Not

According to the article *Managing People – Motivation Streetwise Tips*, in *Businesstown*, fear should never be a motivating factor because even though it may work in the short run, it creates a negative, resentful environment. Motivation flourishes in an environment of respect, involvement, and nourishment of employees’ feelings of self worth. Managers have to set a good example for workers and be an enthusiastic, positive role model. Motivation is not a one-time gimmick or reward, it is ongoing and should be a part of the company culture.

### Ideas to Consider

Most of the principles of motivation mentioned previously center around rewarding good behavior by recognition and praise and creating a secure, comfortable, respectful work environment. Managers should learn more about human nature and motivation in general, and specifically, what motivates individual employees. Even though large companies often spend time and resources developing motivating practices, it may be easier for small- and medium-sized firms to implement changes. Because a small company has fewer employees, many may already have developed personal relationships among themselves and with management. This is especially true in family-owned companies. In these types of companies, the owner typically has great enthusiasm and passion for the business and this translates to the employees. Many of the action steps and suggestions for motivating employees provided by literature are very inexpensive. Personal and handwritten thank you notes or a pat on the back only takes

## MOTIVATING EMPLOYEES

- Bill Sims, whose company designs reward systems for motivating employees states, “Every company today needs to obtain extraordinary results from ordinary people in order to thrive, let alone survive.” Recognition of employees decreases stress, absenteeism, turnover, and related costs and increases morale, productivity, competitiveness, revenue and profit.
- David Maister, international strategic and managerial consultant contends that employee attitudes actually drive financial results, not the other way around.
- Professional development expert, David Lee states in *More Evidence that Managers Make the Critical Difference*, “Employee attitudes have a significant, measurable impact on the bottom line and managers play a primary role on whether that impact is positive or negative.” He further states that improving attitudes and morale of employees can lead to increased quality, productivity, and customer loyalty and reduce turnover, absenteeism, and safety related costs.
- According to *Employee Motivation in Practice, 2004*, job performance is a function of ability and motivation. Ability is related to education, experience and training, all of which can be very expensive to attain. Motivation however, may be simpler and less costly to achieve than previously thought.

a few minutes but can reap big rewards. An afternoon off or a longer lunch hour for team members who make a cost savings change in production or a safety improvement can boost morale. Another idea is to set up a bulletin board and post praise letters from customers or appreciation certificates and awards. Encourage employees to brag about their children by inviting them to post newspaper articles or honor roles on the bulletin board. Consider offering flextime opportunities for employees. Provide a special parking spot for star employees for a week or so. Have a monthly “Brown Bag” lunch where everyone gets together just to get to know one another better. In a small company, the owner might buy pizza once a month for everyone. Take advantage of the goodness in employees—sponsor charitable activities such as collecting for food banks or hosting relay races for charities. The key to successfully motivating your employees is to find out what personally moves them and act on it. Motivating your employees could be the key to your company’s continued success.



# Go the distance

Gifts from Weyerhaeuser Company, American Home Furnishings Alliance, and MSU's Berryman Institute, are equipping the Franklin Center for distance education. State-of-the-art distance equipment is scheduled to be installed in the building's auditorium, 40-seat classroom, and executive conference room in July, 2006. When this installation is complete, the Franklin Center will be able to utilize audio and videotapes, interactive videoconferencing, CD-ROM, Web-based courses and other interactive media to reach individuals in virtually any location in the world. Special thanks go to Susan Seal, Steve Hankins, and Dan Brook of the Mississippi State University Extension Service, Computer Applications Unit for providing guidance and technical assistance in the design and development of this program at the Franklin Center.

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