Continued from page three

attain. Low Stock Levels were considered to be important and very difficult to maintain. An optimum staff level was described as important or very important yet very difficult or slightly difficult to accomplish. A focus on cost control was also described as important or very important; however it was also found to be difficult or very difficult to perform. Focusing on customers was described as important or very important yet difficult or very difficult to do. Focusing on introducing new products was not considered important and was considered difficult or not very difficult to achieve. A policy on continuous improvement ranged from not important to very

important and was considered very difficult to not very difficult to accomplish. Improvement in the supply chain was considered important or very important to and very difficult to achieve. Optimizing industrial Technology investment was described as not very important to important and the degree of difficulty for achieving this feat ranged from difficult to not very difficult. Efficient material flows was considered very important, yet difficult to very difficult to accomplish. Reducing the time to market was described as very important yet difficult to very difficult to accomplish. Reducing product cost was considered important or very important; however it was also described as difficult to very difficult to accomplish.

Conclusions

The results of this survey reveal that the categories of lean manufacturing principles described on this survey were considered to be important or very important to the local printing and publishing professionals polled. The categories considered to be most important were found to be Just In Time production, efficient information flows, focus on the customer, efficient material flows and reducing time to market. The category considered to be of least importance was a focus on new product introduction. These data also reveal that the majority of lean manufacturing principles were considered difficult to very difficult. The most difficult lean principles to accomplish were found to be total quality management, Just In Time production, efficient information flows, maintaining low stock levels and improving supply chain management. It is interesting that two of the lean principles, Just In Time production and efficient information flows, were described as very important and equally difficult to achieve.

Recommendations

The printing and publishing industry can better embrace the principles of lean manufacturing when the degree of difficulty for implementation of these principles decreases. One strategy printing and publishing professionals could employ in order to more fully utilize lean principles are trouble shooting and problem solving techniques such as Kaizen, brainstorming, branching and mind mapping. Printing and publishing professionals who utilize these problem solving techniques can identify the specific problems that are impeding lean principles. These individuals can then go on to find the workable solutions which will facilitate fully embracing and implementing lean principles which will in turn help keep these professionals competitive in the 21st Century global economy.

Deloitte & Touche, 2002. Retrieved from the world wide web 11/11/06 http://www.deloitte.com/dtt/cda/doc/content/UK%20-%20Road%20to%20Worldclass%20Manufacturing(1).pdf

Be sure to visit www.igaea.org over the next few weeks to find out some exciting information on the 2008 IGAEA conference. Hint hint, bring along some sunscreen.



From the President



In days gone by, we used to frequently hear and see, "See the US the IGAEA Way." Th idea was either before, after or on the way to conferences you would explore parts of the country you hadn't seen before

My wife Sheryl and I did that as we left Cal Poly. W joined the Hearst Castle tour, and then saw the sea lions lounging on the beach as we drove north along the coast. The next few days found us at the Monter aquarium and fisherman's wharf, the Japanese garde in San Jose and on to the really big trees of Sequoia National Park. How many reams of paper could you make from one of those trees?

In the LA area, we saw the oil and asphalt oozing up at the LaBrea Tar Pits, and all of the recovered fossils. Fortunately, this fossil was able to move on to the original Muscle Beach at Santa Monica where I was tempted to do a few pushups, but just tempted. resisted the urge to show off.

On our final day before departing, we toured the Huntington Library and Botanical Gardens in the Pasadena area. I'll bet you didn't know that among their rare book collection they had a copy of *The* Gutenberg Bible. Of the original 120-130 printed or paper, and 40-45 on vellum, the Huntington owns of of the twelve surviving copies on vellum. Thirty-six

IGAEA MISSION STATEMENT

	VOLUME XXXX NUMBER 3 2006–2007 SCHOOL YEAR
he RA	APHIC ARTS EDUCATION ASSOCIATION, INC.
	copies survive on paper. Huntington purchased a copy at auction in 1911 for \$50m, the highest price every paid at that time for a book on vellum. A tour of the back lot and sound stages of Warner Brothers wrapped up our Central CA/LA experience. We are already checking out things to do in New York. Why don't you plan to join us at RIT, July 22- 26 th in Rochester, NY and "See the USA the IGAEA Way?"
7	Dovid Walley
	Look inside for the following articles: Printing and Publishing as Related to Lean Manufacturing, and Printing in Par- adise.
	Also, be sure to check out the first install- ment of a series on deaf in printing. There is also an obituary for one of the great graphic communicators, as well as other

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Founded in 1935, the International Graphic Arts Education Association, Inc. (IGAEA) is a non-profit organization of educators in partnership with industry, dedicated to sharing theories, principles, techniques and processes related to graphic communications and imaging technology.

Among the activities sponsored by IGAEA are an annual conference, a comprehensive publication program, industry liaison programs, and resource networks. IGAEA fosters career awareness by promoting Graphic Communications Week, assisting Boy and Girl Scouts with their merit badges and interest projects and recognizing success through the Gutenberg Student Awards.

IGAEA members include over 700 educators representing approximately 40,000 students; future prospective employees!

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Printing and Publishing as Related to Lean Manufacturing

Foster-Blackwell, E., Gillispie-Johnson, C. and Gilbert, E. D. North Carolina A&T State University, Greensboro, NC.

Introduction

Deloitte & Touche conducted surveys of thousands of world leaders in manufacturing. The survey was aimed at helping these leaders confront the realities of globalization, create strategies for product innovations, solve the paradox of satisfying virtual customers where quality and customer satisfaction don't always correlate, successfully integrate into the global supply chain in order to compete in the 21 century global market. The survey delivers a unique insight into the extent to which lean manufacturing was embraced in the United Findings Kingdom (UK) and exposes barriers to embracing lean principles, (Deloitte & Touche, 2002).

The survey revealed there was a high awareness of lean principles and awareness of lean focuses among participants. One of the most important lean features was found to be focus in on customers, Just In Time The results from respondents revealed: The responproduction, reducing time to market and supply chain management; however these features were considered harder to attain.

The survey included 100 manufacturing companies based in the UK from industries such as; pharmaceuticals, electronics, white goods, engineering, packaging, and printing equipment and telecommunications. The majority of respondents had heard of lean manufacturing. The lean principles considered to be most important were total quality management, efficient work flows, reduced product cost and policy of continuous improvement; however these principles were considered quite difficult to achieve.

Discussion

A similar survey was conducted in Greensboro North Carolina to ascertain the opinion of printing and publishing professionals regarding lean manufacturing. The survey was a modified version of the Deloitte & Touche instrument. The face validity of the survey was tested to assure that the instrument covered the intended topics by three professional educators from the

Graphic Communication Systems and Technological Studies Department (GCSTS), from the Printing and Publishing concentration. The questionnaire instrument was modified based on this feed back to relate to printing and publishing professionals.

This survey utilizing a questionnaire was used to collect information that was not directly observable regarding lean manufacturing to the printing & publishing industry. While revising the instrument the construct of interest was lean manufacturing in the printing & publishing industry. The operational definition of this construct is utilization of principles associated with lean manufacturing by industry professionals. The limitations of the survey will not allow the results of this survey to be generalized to all printing & publishing professionals.

The survey was completed by a convenience sample from the printing and publishing industry. The individuals surveyed owned small, medium sized and large printing and publishing operations.

dents listed total quality management as important or very important. The respondents also stated that total quality management was very difficult to achieve. The participants considered Just In Time production very important yet very difficult to accomplish. The respondents listed the Efficient Flow of Information as very important as a very important goal yet very difficult to

Continued on back cover



A Tradition Unheard

By Dennis Daniel

I have worked in the Graphic Communication industry for twenty-five years. During that time, I have worked with, taught and trained individuals from diverse cultures. The primary differences we all encounter in the work place are race, gender and religion. I feel fortunate having experienced not only those differences, but also the opportunity to work with people from around the world and people with disabilities.

Early in my career I learned about other countries and cultures through the people I worked with, some of which, I'm not sure I knew existed before. The primary benefit of sharing our food, language, customs, and values was the almost immediate destruction of ignorance, poorly formed impressions and stereotypes that each of us had carried for many years. We all know how these things happen during the course of our lives, some blame it on social programming, others say it's simply a general lack of information, either way, we tend to fill the voids with assumptions and hearsay.

More recently I became aware of people with disabilities through work and family. The ADA may have had something to do with that; public places are much more accessible now, and people with disabilities are increasingly active and involved in our communities. One effect of this evolution is the same breakdown of stereotypes, labels, and assumptions that I mentioned before, this time concerning the abilities of disabled people. Technology has also had an impact, making it possible for an even larger section of the disabled population to become involved and an integral part of many industries, especially Graphic Communications. Although we have seen a tremendous increase in the number of people with disabilities involved or affecting our daily lives, one cultural group still remained a mystery to me until about three or four years ago, deaf people.

I had been working at an educational facility that had inclusive or "mainstreamed " deaf children in the school. After observing and talking with people involved, I became very interested and decided to take sign language classes. It wasn't long before I discovered another very diverse and vibrant culture in my community. I was a slightly stunned that I had somehow missed what seemed like an important part of our society. It was as if deaf individuals existed behind the scenes, hidden from me.

Shortly after finishing my first couple of sign language classes, I began working as a substitute teacher or an aid almost exclusively in deaf and hard of hearing classrooms. Roughly three years ago I was offered a position as a printing instructor at the Illinois School for the Deaf. I was still a novice in the language, but I felt confident that my skills and experience could carry me until my language skills improved. Becoming involved in deaf education on a daily basis isn't only about where I work, but with schools like this, there is often a large deaf population living in the area. I use my language on a regular basis outside of work, and the entire community is very deaf aware and accepting, what an eye opener! Although I currently print for the school, before I arrived, all the printing was done by deaf staff members and students, from design through bindery and shipping.

As I began to work with and teach the deaf and hard of hearing, I became acutely aware that there were few limitations regarding what they could do. I shouldn't have been surprised, but I was. My first year, I had a student worker who learned fast and was able to perform all the basic operations on my equipment, including the printing press. I encouraged him to pursue Graphic Communications as a career. However, when I began to investigate the possibilities for this student and any future students I may have, I was immediately confronted with stereotypes and an almost complete unwillingness by people in the industry to hire the deaf. The most significant roadblock was for press operator, the most common refrain was, "they need to be able to hear the press, you always hear problems before you see them." I thought, "you've got to be kidding me?" I have worked in a couple of shops as a press operator, that were so loud we had to wear hearing protection and use rudimentary signs in order to communicate. It was an effort to hear my press when I was standing right next to it! I have also been in many other shops, which had similar conditions and in fact, my own hearing has been adversely affected from my time spent working in the industry. I thought that a deaf person might be perfect in these situations!

Another reason I was given for not hiring the deaf was the language barrier. I'm sure most of us have worked or gone to school with people from other countries who have limited English skills at best. The managers, employees, teachers, and students almost always, successfully integrate these people, especially if they show a strong work ethic or a capacity to perform specific jobs. We have assisted in the integration of many individuals into American industries for a very long time, incorporating diverse cultures that we now claim to be part of own. I have been accepted as a hearing person into a community of the deaf. I see no reason why the deaf and hard of hearing cannot be accepted in the workplace of the hearing, other than a lack of willingness to do so.

Since I first encountered this issue, I have been looking for ways to answer, challenge, or address some of these problems. The students and staff here (at the Illinois School for the Deaf) have been a tremendous help, but I was not making the kind of progress I was hoping for until I was asked to write for the school's quarterly newsletter. While doing some research in the ISD museum concerning my subject, I came across articles and reports detailing not only the printing history at ISD, but also some of the many contributions the deaf and hard of hearing have made in our industry. The deaf have a very long and proud history in the printing industry. With the addition of this information, I believe I can break down some barriers, which may create opportunities for my students.

I plan to contribute further results of my research in the upcoming issues of the Communicator that detail the history of deaf in printing, based on what I found in print and from interviews with retired deaf industry experts at the school. Armed with this information, experience, and history, each of us can begin to effect change that will open doors for members of deaf culture and thereby enlarge the candidate pool of qualified people that the industry urgently needs.

In Memory

Philip Age

MATTOON -- Philip D. Age, age 51, of Mattoon, passed away at 11:40 a.m., Saturday, June 2, 2007, at Sarah Bush Lincoln Health Center. A memorial service honoring his life will be held at 11:00 a.m., Friday, June 8, 2007 at the First Christian Church in Charleston with Reverend Michael Southard officiating. There will be no visitation. Mitchell-Jerdan Funeral Home is in charge of the arrangements.

Phil was born in Louisville, Kentucky on March 14, 1950, the son of Alton and Lola May (Hume) Age. He married Jill Pospisil on January 22, 1977 at the Chapman College Chapel in Orange, CA. She survives. Other survivors include his mother, Lola May Age of Santee, CA; his children, Justin G. Age and wife Damaris of Mattoon, and Andrew Age of Mattoon; and one brother, Barry Age of Santee, CA. He was preceded in death by his father, and one brother, Stephen Age. After graduating from Long Beach State in California, Phil joined the Disney organization in the creative entertainment field at Disneyland California. He then started his graphic arts teaching career at San Dieguito in Encinitas, California. He developed a passion for teaching graphic arts and the new technology within the field. This passion led him to complete his doctorate degree at Illinois State University in Curriculum and Instruction.

Phil's career spanned 30 years of teaching from the high school level to the graduate level. The last seven years of his long career were spent at Eastern Illinois University. The culmination of his time at Eastern Illinois University, was spent developing a curriculum program integrating industry into education. Phil published numerous articles in the field of printing. He was the National Chairman for the PrintEd National Accreditation Program and continued to be involved in numerous other organizations in his field.

He was the founder and advisor for the Eastern Illinois Technical Association for Graphic Arts (TAGA) student chapter. Phil enjoyed spending his free time with family and was an avid golfer. To light a virtual candle or share a memory with the family, please visit www.mitchell-jerdan.com.

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Printing in Paradise

By Dennis B. Dougherty

In mid-July of 2005, my wife Elaine and two other couples, went on a Caribbean cruise to the US and British Virgin Islands for our 30th wedding anniversary. We did this between the two hurricanes, Dennis and Emily, just to make things interesting. As I awoke the first morning I noticed the daily itinerary that had been slid under the door during the night. As any good instructor of printing would do. I looked over the paper not for its contents but for the printing quality. What I found was a four color mast head with the various things to do for the day, and what to see at the next port of call, printed in black ink, not toner as one might expect. After a quick sniff, I found that it was FRESH ink. After breakfast I stopped at what would be the front the desk at any hotel in the country, but this area on board the ship was the guest information center. I inquired about the onboard printing facility and asked if I could have a tour. Once they found out I taught printing technology in a college, things went much smoother and a tour time and day was scheduled. On the day of my tour, I arrived for my 10am escort to the onboard print shop where I was led down much smaller and narrower stairs than the general public would navigate on board ship. I was introduced to Angelo, the ships printer, who was from the Philippines and owned his own printing company there. He explained that his wife would run the printing company while he was working on the cruise.

I was surprised to see all of the equipment in a small area just off the main crew transfer corridor which ran the length of the ship below the water line. Equipment in use was a Multi 1650 single color press, CTP plate maker that made silver master plates, a small paper cutter, Canon copier and a Dell PC with PageMaker and Photoshop. All standard sheets were preprinted 4 color shells that were imprinted as needed in black. The daily itinerary was sent to the print shop as a PDF file from the entertainment department. Angelo explained that any time they would include a photo it would print as a poor quality print. He knew that they were saving the PDF as a low res 72dpi file "that looked good on the monitor". They would not believe him because they had gone to college to work in entertainment and graphics and learned how to prepare information for printing, consequently the poor quality was blamed on the print shopIt does not change no matter where you go, does it?!!!

Sounds great? Think you would like to spend your summer cruising around the Caribbean using your expertise providing quality printed pieces for the sailing public? Try these split shift hours: 1am to 6am to print the "Dailies", items for the morning, and day activates. It is more than just the daily itinerary. They include an 8-page summary of "News" from the New York Times, In Port that is a two-sided 11x17 sheet that has points of interest about the next port including a map. The second part of the workday will start at 4pm and go until you get done with other ship duties thrown in with little time for yourself and you are always on call for other ship work.

At our first port of call, Tortola, British Virgin Islands, we did the traditional tourist sightseeing which included a boat tour of the bay and the area that was thought to be Black Beard's cave where he hid higold. Gold coins have been found in the cave and it has now been closed to divers however gold coins continue to be found outside the entrance to the cave. On the trip I asked the captain if there were any print shops on the island and he directed me to Caribbean

Printing Company, which was the first to offer printing locally and now does all of the printing for the government in

the British Virgin Islands. I met the General Manager and he showed me around the facility. Sitting on the floor was a Heidelberg DI46, AB Dick press, and Duplo 4000 collator/stitcher, other presses, including letterpress equipment for numbering and perforating, various copiers and wide format machines. All of their supplies come from Puerto Rico and service came from Miami so they had to learn how to perform equipment repair on their own. At the time he was looking for a graphic designer to hire.

Next stop, St. Thomas, US Virgin Islands where I had pre-arranged a tour of a print shop. Prior to leaving for





Angelo, Pressman

the cruise I had searched the Internet back together. The area reminded me of a dinghy low for printers in the areas we were light interrogation room you see in old movies. Their going to visit. I found one web page main business was producing Memory Books for the that looked very professional and families of recently departed family members. These books which included stories, poems and photographs discussed with the owners son via ewere distributed to attendees at the funeral to celebrate mail about arranging a visit. Again, after the required group tourist visits the life of the departed. The books were created in I set off to visit what I thought to PageMaker and produced on the copiers one of which be a very professional and well run was a color unit. As I left the print shop I was very glad printing company. I found a cab and to see the cab driver waiting for me, because my walk gave the driver the address. His reply back would have been, shall we say, interesting. I guess was "are you sure this is where you this proves that what you see on a web page may not want to go"? I assured him that it be what is reality!

was the correct address and asked him how far it was from where the While on the island of St. Thomas, my wife and I did ships were docked. I was thinking some duty free shopping. I picked up a nice Fuji 5100 about walking back and taking digital camera at about half the price I would pay at in the sights of the island. To my home. On the way to the shopping district I noticed surprise, we were not traveling to a a small print shop and decided to stop in on the way business district (I was thinking of back to the ship. I met McDonald Colaire who is the a print shop in a strip mall or shop- shop manager of Cornerstone Printing and he gave me ping area). We were heading to a tour. Unlike the previous shop this shop was very the interior of the island where the clean but small. They had several AB Dick 360 offset homes, or more correctly shacks, presses, one of which was waiting for parts to arrive were starting to bother me and I so they could repair it and get it up and running. Again started to wonder if I was being they do the majority of their own repairs. Other equiptaken for a ride by the cab driver ment included a small tabletop folder, drill press and when all of a sudden he pulled into collator. a driveway, or more precise, a yard In the afternoon I visited Charlotte Amalie High School to inquire if they had a graphics or printing program. I found out that web page design and some screen printing in art class was part of the technology program. As mer school" math classes. What other season do they have in the Caribbean? We discussed the merits of a good education and the need for good math skills. They seemed to be interested in what I had to say when they found out that I taught in a technical college.

and there on the side of the building was the name of the print shop. As I was getting out of the cab and paying the driver he did not offer to but- said he would wait for me I left I met a group of boys who were there for "sumand I was very grateful. I took a deep breath and stepped into what was no more than a shack and was met by a very large dog with cats all around.

I introduced myself and ask for my contact, who was not in at the time. I found myself talking to his father, Our last stop before returning to Port Canaveral was who had come to the islands from the United States Nassau. As we are heading for the beach in a cab 20 years ago and set up the shop. I explained my Barb, one of the woman in our group, saw a sign and arrangement with his son to visit their print shop. He announced that "there was another print shop for Doc was happy to show me around what I must say is the to visit", so I came back from the beach early and startstrangest print shop I have ever been in, even during ed out on my search for print shops. I found a sign busimy time selling printing equipment. There were no ness and The Print Shop which is part of the Symnoette presses in use; they all had piles of "stuff" on them. Marketing Group. Although I did not get a chance to Not one computer had a cover on I, just the frame meet the owner or tour the print shop in 2005, IGAEA with wires running everywhere. And several copiers has been invited to tour the facility during the 2008 that also showed signs of being worked on and not put conference when we dock in Nassau.