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*Facilitating Learning in a
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Facilitating Learning in a Changing World



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Global Partner in Learning

From the Editor

Steve Glazner

APPAs 1999 Educational Conference and 86th Annual Meeting takes place June 20-22 in Cincinnati, Ohio, and the program is a tremendous one. A provocateur panel on privatization, collaborative learning labs on organizational change and the learning environment, sessions on topics from Y2K to accreditation to capital equity and more, and updates on the Strategic Assessment Model, the Comparative Costs and Staffing survey, and the trades guidelines are just some of the dynamic programming that APPA has planned for this meeting. Additional reasons to attend and learn are special presentations by Michael J. Gelb, George B. Wright, Edwin T. Cornelius, and Les Brown.

The meeting's theme of Facilitating Learning in a Changing World allowed us to publish an eclectic mix of articles for this issue of *Facilities Manager*. In addition to his regular Focus on Management column, Val Peterson shares with us the things we need to do, and the attitudes we need to have, to create an environment that is conducive to teaching and learning. Charlie Jenkins emphasizes the importance of establishing and fostering good relationships with those around us, and that we're simply not as effective leaders and learners if we do not.

Our other authors present articles on diversity training, supervisor training, new trends in student housing, and a detailed look at CMD Express, a construction tracking service offered by one of APPA's strategic business partners.

In April APPA welcomed Dina Murray to the staff as our new director of member services. She brings to APPA a wealth of membership experience from her previous positions at the Council on Hotel, Restaurant, & Institutional Education and the National Association of Retired

Federal Employees. Be sure to meet Dina at the Cincinnati annual meeting.

Following is a contact list of the current APPA staff. 🏠

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1999 Election Results Are In

The Tally Committee has tabulated all the votes in this year's election, and the results are in. **John P. Harrod Jr.**, director of physical plant at the University of Wisconsin/Madison, has been elected APPA's President-Elect. This is a three-year sequence that comprises the offices of President-Elect, President, and Immediate Past President.

Philip L. Cox, director of facilities management at Cornell University, was elected to a two-year term as Secretary-Treasurer to succeed Hod Wells, whose term ends at the Cincinnati annual meeting. **Jack K. Colby**, director of facility operations at North Carolina State University, was reelected to a second two-year term as APPA's

Vice President for Professional Affairs. The new officers begin their new positions at the June annual meeting.

In other news, all three proposed Bylaws changes were adopted and become effective immediately. The 1999 Tally Committee was chaired by Al Guggolz, member emeritus. The other members were Glenn Cyphers and Douglas Helmann of George Mason University, and David Petersen of Fairfax County Public Schools.

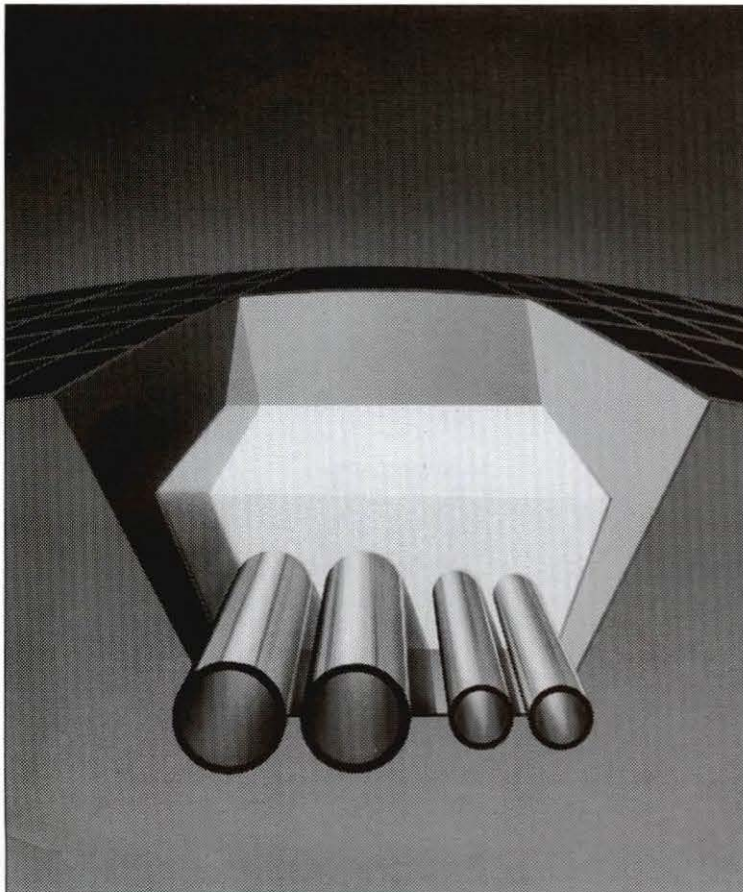
K-12 Best Practices

**Submitted by Eric Shawn
Plant Manager, Catlin Gabel School
Portland, Oregon**

Over 100 facilities workers from churches, K-12 schools, colleges, and

community colleges in Oregon, Washington, and British Columbia gathered at Catlin Gabel School to discuss and recognize best practices which 1) stood out for effectiveness; 2) helped the organization accomplish its mission; and 3) made an effective use of limited resources. Although turnout was lower than in previous years, the quality of the best practices presented was the highest to date.

The three most impressive best practices were the team cleaning process used by Paul Hensley at Bellevue Community College in Washington, the lighting and controls upgrades implemented at Lower Columbia College in Longview, Washington, and the garbage



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compactor installation at Catlin Gabel School in Portland, Oregon. On the maintenance front, the Building Operator Certification program developed by the Northwest Energy Efficiency Council is laying the groundwork for making a strategic difference. More information on the BOC can be obtained from Will Miller by e-mailing willnva@spiritone.com.

Lower Columbia College walked away with best practices honors in the custodial, maintenance, grounds, and safety categories. Catlin Gabel School was voted as having the Best Recycling Practices. Sherwood School District of Sherwood, Oregon, took second place among Best Grounds practices.

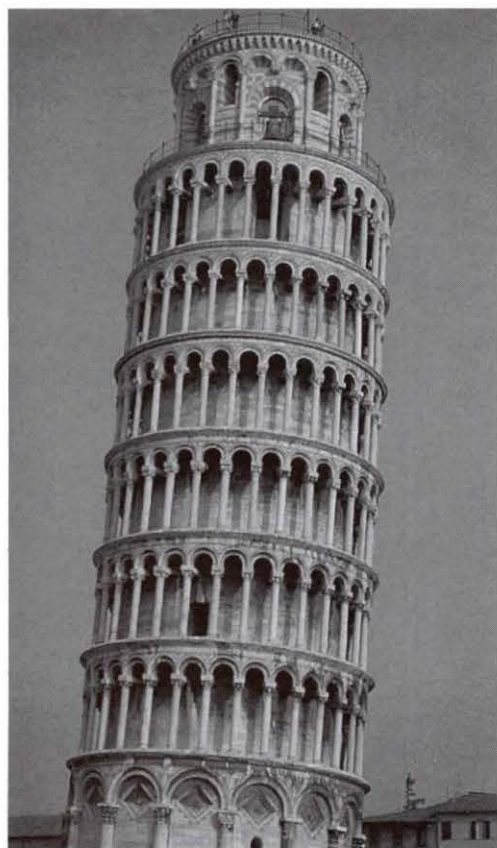
Kathleen Mulligan, in transition between roles as director of facilities at Oregon State and vice president

for facilities at Princeton University, used her keynote address to describe criteria for quality. Kathleen's ideas were well received, and the ensuing roundtable discussion emphasized the need to increase the visibility of physical plant successes while also developing high quality communication between facilities workers and their customers.

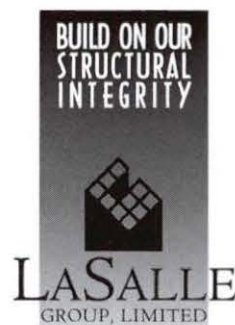
Analysis of the recommendations for best practices and the voting results show that more attendees and the majority of ideas and recommendations came from organizations tending to have lower wage rates. Consequentially, wage rates below the local living wage were among the significant issues raised at the workers roundtable discussion. Workers in public K-12s with contracted management services were the least happy.

Some workers from private organizations expressed feeling unsupported. Many facilities workers agreed on the need for more thanks and acknowledgment. Most facilities workers were eager to learn more about their fields of work. The need for high quality communication flowing back and forth was widely discussed.

Best practices recommended at the 1999 Best Practices Conference will be made available on Catlin Gabel's website at <http://www.catlin.edu/maint/FacilitiesHomePage.html>. Many thanks to our sponsors and all vendor participants. The Best Practices Conference is planning to follow up on some of the preliminary workshops and a few of the ideas presented at roundtable discussions during one or two no-cost sessions for past participants this summer. 🏰



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Surveying Member Needs

by E. Lander Medlin

As you may be aware, APPA recently engaged an outside marketing research firm to conduct a comprehensive member opinion survey on our behalf. Although the survey was only recently completed, some preliminary results are available that provide valuable insight into member needs for information and education about the facilities profession, and members' expectations of APPA. My article for the July/August issue of *Facilities Manager* will focus in much greater detail on the final results and recommendations. I believe you will find the responses received from a random sampling of your colleagues equally interesting and informative.

Expectations of APPA were clearly articulated with requests for:

1. high quality information and education (experiences) concerning the present and future of the profession; and,
2. access to knowledge that stems from quality research grounded in comprehensive data collection, and information derived from effective/best practices in the industry.

Your concerns were captured in the responses to one of the final questions in the survey: "What are the most important business-related concerns facing you and your facility today?" Overwhelmingly, you responded with the following concerns: budgeting, costs, staffing, deferred maintenance, utilities deregulation and compliance, and outsourcing. In the face of these expectations and concerns and in light of the fact that the world is

changing dramatically and at such a rapid pace, it was not surprising that members continually emphasized that APPA must keep pace by establishing a global perspective, staying abreast of the newest technologies, keeping the membership informed on legislative and regulatory issues, and increasing the awareness of the facilities profession with senior institutional officers.

As I reviewed and fully understood your stated needs, concerns, and expectations, it wasn't until I began to consider the significant shift we have made in the educational programming for this year's 1999 Educational Conference and 86th Annual Meeting that the connection materialized. The business concerns identified and reinforced in the Member Opinion Survey are representative of the educational programs the Education Committee has outlined for this year's conference. The alignment of your stated needs, concerns, and expectations with the educational program offerings for the annual meeting is remarkable!

First, our target audience has been modified to reflect those individuals at the vice president, associate vice president, director, and assistant director levels or to those of you who aspire to these positions. This shift is important since we have also changed the educational venue to reflect the needs of these management and leadership positions. Our primary focus will be on the managerial and leadership issues and responsibilities faced by these individuals rather than a more technically-based program. Further, we have outlined the educational offerings as a series of programs within one of four "categories" to enhance and reinforce your learning, exchange and dialogue. These session categories are identified and described as follows:

1. *Lecture Series*: These sessions will focus on a variety of leadership and management topics. Presentations will be given by APPA institutional members and business partners who have expertise in a specific area of the facilities profession and want to share their knowledge. The lecture series is intended to be informational, offering attendees new concepts, strategies, and case study work that may better help them to manage their own facilities department.
2. *Facilitated Information Exchange Sessions*: One- or two-hour discussion groups led by facilitators on a current topic/critical issue. Facilitators will introduce the topic and give background information, and then encourage group interaction, the sharing of information, and, in the case of the collaborative learning labs, time to develop an action plan that participants can take away with them.
3. *Collaborative Learning Labs*: Participants will have the opportunity to collaborate with expert panelists and colleagues to identify solutions to a specific problem/challenge facing today's facilities manager. These labs will take a practical hands-on approach to developing an action plan that can be implemented back at the participant's campus.
4. *Provocateur Panel*: A two-hour session designed to provide facilities managers with an opportunity to think "outside the box." These sessions are not about how-to, but rather why not? This is an excellent opportunity to get together with other future-minded colleagues to network and discuss a topic that is subject to controversy. Participants will have the opportunity to disagree, explore, debate, provoke,

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react, and challenge the panelists' beliefs, as well as other participants' tenets. These sessions are designed to challenge rather than offer solutions. Will participants reach a conclusion? Probably not. But they will leave having heard and responded to important topics affecting the future of facilities and higher education; increased their insight and ability to think through controversial issues, become aware of emerging trends; and have a greater understanding of the influence a forward-thinking facilities manager can have on an organization's success.

These delivery mechanisms will offer a more engaging set of sessions for both the presenters and the attendees. In addition, you will have ample opportunity to develop action plans for more immediate implementation when you return to your institution. You might even be influenced such that you change your viewpoint about a particular issue or topic.

As I read your survey responses and reflected on the educational sessions for this coming annual meeting, it became crystal clear that the very topics highlighted were covered within this short and compact three-day period. Let me illustrate:

1. **Outsourcing** is addressed by a provocateur panel on privatization entitled "Conspiracy or Collaboration?" Few issues are more contentious in facilities management than the subject of outsourcing. Is it an efficient way to increase service levels and save money, or does it result in poor quality and increased risk? The panel will discuss the pros and cons of privatization and offers some useful tips you can use to make decisions at your institution.
2. **Costing** and the use of emerging technologies as a tool is the focus of the CMD Group's presentation of a web-based construction database that will reduce the time you and your staff expend researching information on construction projects and

provide quick, easy access to costs, building products, comparative project costs and design specifications, and much more.

3. **Utilities deregulation** coupled with capital renewal and deferred maintenance is emphasized in a case study presentation. Being confronted by intense competition for increasingly limited funds, facilities managers and administrators are all too often called upon to operate and maintain aging facilities on limited budgets. The case study will show how to embrace these challenges as opportunities, and take advantage of radical changes in the structure and operation of the energy industry in order to operate and maintain its facilities.
4. **Staffing and costing** are addressed by a review of the "zero-based maintenance staffing standards" research: how they have accomplished the task thus far; what the data collection instrument might comprise; and an overview of definitions and potential models. A second session will focus on APPA's costs and staffing (CCAS) tool, our benchmarking assessment model (SAM), and the Baldrige Award Criteria's relevance to the facilities operation. Both programs are a facilitated information exchange where you will have the opportunity to participate by asking questions and offering your own experiences.
5. **A budgeting and capital planning** session will offer new approaches to the allocation of scarce institutional resources based on increased accountability for capital expenditures, deferred maintenance backlogs, introduction of new technologies, and by a need to improve campus attractiveness for students, faculty, and staff recruitment and retention. This session describes an innovative approach for a comprehensive long-term capital planning and budgeting to create confidence in preparation of capital budget requests. The core of the process is an

integration of an assessment of physical conditions and program requirements into consolidated cost estimates and facilities recommendations.

Please remember that the programs highlighted above were done so for illustrative purposes and represent just the "tip of the iceberg" when it comes to the quality and quantity of choices available throughout the three-day Educational Conference & Annual Meeting.

Besides the substantive changes in the content and delivery of the breakout sessions, you will be given the opportunity to converge each afternoon as a full group to be reenergized by a motivational speaker or revisit the exhibit hall during our special afternoon reception. We also have an exciting keynote speaker, Michael Gelb, who most recently wrote the book, *How To Think Like Leonardo DaVinci*. Drawing on DaVinci's notebooks, inventions, and legendary works of art, Gelb introduces the Seven DaVincian Principles—seven essential elements of genius—that we too can develop. These seven principles range from the celebration of an insatiably curious approach to life to the willingness to embrace to uncertainty and paradox. These principles will seem at once intuitively familiar and surprisingly powerful.

Finally, don't forget that we have successfully secured Les Brown as our banquet speaker/entertainer. Les Brown is a highly successful, internationally renowned motivational speaker who help you see life's obstacles as opportunities and today's present setbacks as tomorrow's future challenges.

I guarantee these programs will stimulate new ideas and expand your professional knowledge. If you are in any position of management and leadership, you won't want to miss APPA's 1999 Educational Conference & 86th Annual Meeting this June 20-22, 1999 in Cincinnati, Ohio. 🏰

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Facility Asset Management

Public/Private Partnerships for New Construction

by Matthew C. Adams, P.E.

In good economic times and bad, there is never enough funding available for institutions' growth plans. For state institutions, an opportunity comes once every five years or so to "go to the well" and secure funding for a new facility. At private institutions, new construction is closely linked to the capital campaigns and the subtle or overt influences of the giver.

In between these opportunities, funding demands are still present. The institutions typically look to borrow funds for new construction or renovations in lean-capital times. Borrowing is not always a good idea. Some states and boards strictly limit the debt capacity of their respective institutions. Debt does adversely affect the balance sheet of the institutions as well.

On a smaller scale, facility and business officers have investigated "off-balance sheet financing" for some projects. This approach is leading into large-scale project consideration. The possibilities of public/private partnerships formed to develop facilities in an off-balance sheet format are real. A recent project under consideration for the construction of a new parking deck provides a look into the evaluation process.

For any one of a host of reasons, a small college may decide to investigate

non-traditional forms of financing for a new parking structure. The college has a clear need for the parking deck and a good location identified for it on the campus master plan. Land is in short supply near the center of campus so the deck must be of multi-story design. Specifically, the college now has 2,700 students, faculty, and staff. The current surface lots are uncovered and located a healthy distance away from the classroom buildings.

Initial feedback indicates that the campus population is very interested in close-in, covered parking. As such, the college feels comfortable estimating that at least 20 percent of the total drivers will use the deck on a first-come, first-served basis. In each region, construction costs will vary, but generally speaking using \$9,500 per parking space is a good estimate for hard and soft construction costs. For this project, the estimated cost is $(2,700 \times 20\%) \times \$9,500$ or \$5,130,000.

At this point, the college knows the following: there is a need for a close-in parking deck, there is a piece of land available for this structure, the costs of the structure is approximately \$5.1 million, and the traditional forms of finance for this capital improvement are not available.

The college is now ready to look for potential private developers and parking lot operators with interest in such a project. In this economic climate, the size of the project has specific influence on the pool of potential private development partners. For example, an \$8 million project is too small for the large real-estate investment trusts (REITs) that are in the parking business. There are national and regional parking

management companies that welcome this size deal and are actively looking for college and school deals like the one described here. In addition, commercial developers within the particular state are very likely to have interest in such a project. Care is necessary to qualify potential partners without parking development experience. The developer does not have to manage the deck, but the management company must be identified and included in negotiations from the onset.

In the commercial development market of the late nineties, investors expect and get a 12 percent return on solid and safe projects. Many partners may not have done business with colleges and schools before. Some illustration of financial stability might be required.

Many developers are accustomed to purchasing and hence owning the land that they develop. Obviously, this is not an option for educational institutions. The alternative is a long-term lease of ten or twenty years. The costs to the developer and the project for the lease is a dollar per year. The budget for the deck is set and published.

Now the institution must negotiate or take bids for the return on investment for the deal and the operating costs for the life of the project. It is possible that some bidders may expect more than the 12 percent return due to a lack of equity in the deal. It is more likely that they will look to make this up in the profit of operating the deck. Here is how the numbers look for this example:

The cost of capital for the project has little variability in the off-balance sheet format. The private partner

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Construction Costs and Developer Margin	Operating Cost & Management Fees
\$5,130,000 @ 12% for 15 years	Attendant labor, 2 x with 25% benefits \$47,500 per year.
\$615,600 per year or \$51,300 per month	Maintenance, repair, utilities, insurance, supplies, fees, and profit \$42,122 per year
\$19 per month for each of 2,700 total faculty, staff, and students	\$13.83 per month operating expenses per month for each of 2,700 total faculty, staff, and students

must receive a fair return for the deal to take place. As institutions become more sophisticated in negotiating these deals, the rate of return for the partners may be reduced in return for certain guarantees or other vehicles that increase the credit worthiness of the project. Like any form of debt, the safer the investment the less the cost of money. In this example the basic

cost to build and pay for the deck is \$615,600 per year or \$19 per campus person (2,700).

The operating costs and management fees can vary considerably. The National Parking Association, APPA's equivalent for the parking industry, publishes annual surveys on operating costs. The respondents are primarily private parking decks operated by management companies. Attendant labor is the largest operating expense for a deck, at more than 50 percent. The remaining charges include: maintenance, fees, insurance, accident claims, supplies, permits, telephones, taxes (some states have parking fee taxes), uniforms, management fees, utilities, and operating equipment replacement costs.

Under close scrutiny, it appears that colleges and schools can expect to greatly reduce or eliminate some of the line-item expenses as a result of their tax-exempt status, preexisting insurance, security, maintenance staff, etc. Most colleges would also save by opting to have minimal staffing for a deck that is controlled by a parking sticker. In other words, the above referenced \$13.83 per space in this example is likely conservative.

This project is ready to be built when the institution and the private partner agree that the project will cost \$705,222 per year for 15 years. This total includes \$615,600 in construction amortization and \$89,622 operating costs each year. The question then becomes one of collection options. At one college recently, the

student government voted overwhelmingly to spread the costs of a new deck to everyone equally in the form of increased parking sticker fees. The new deck would then be open to all on a first-come basis. In this example, the annual parking fee for this project is \$19 plus \$13.83 or \$32.83 per month, or \$393.96 per year.

This same student government polled its members and reported that the maximum acceptable cost per month for such improved parking was \$50. One other option was to charge only those persons that used the deck. Under a parking sticker system, 150 percent of the total number of 540 spaces could be sold as stickers. This assumes that everyone does not show up at the same time. The costs per space per month under this option climbs to \$72.55. A third option is to engage the school/college to supplement the project costs. In simplest terms this might take the form of \$10 per month per space increase in management fees, resulting in a reduced charge of \$22.83/month or \$62.55/month for the first two financing options.

The deck is designed and the capital and operating fees are negotiated with the private partner. No debt has been assumed by the institution. From the institution's perspective, payment obligations for the deck take two forms: faculty, staff, and student parking fees and possible second cash payments to supplement or make up any shortfall from reduced campus parking fee receipts. After 15 years, the ownership of the deck is transferred to the institution. To some this project is radical and to others it makes sense. In other public industries such as hospitals, for example, these public/private partnerships take place often. Private/public development partnerships will be accepted and undertaken by those institutions that simply need more options for facility expansion. 🏢



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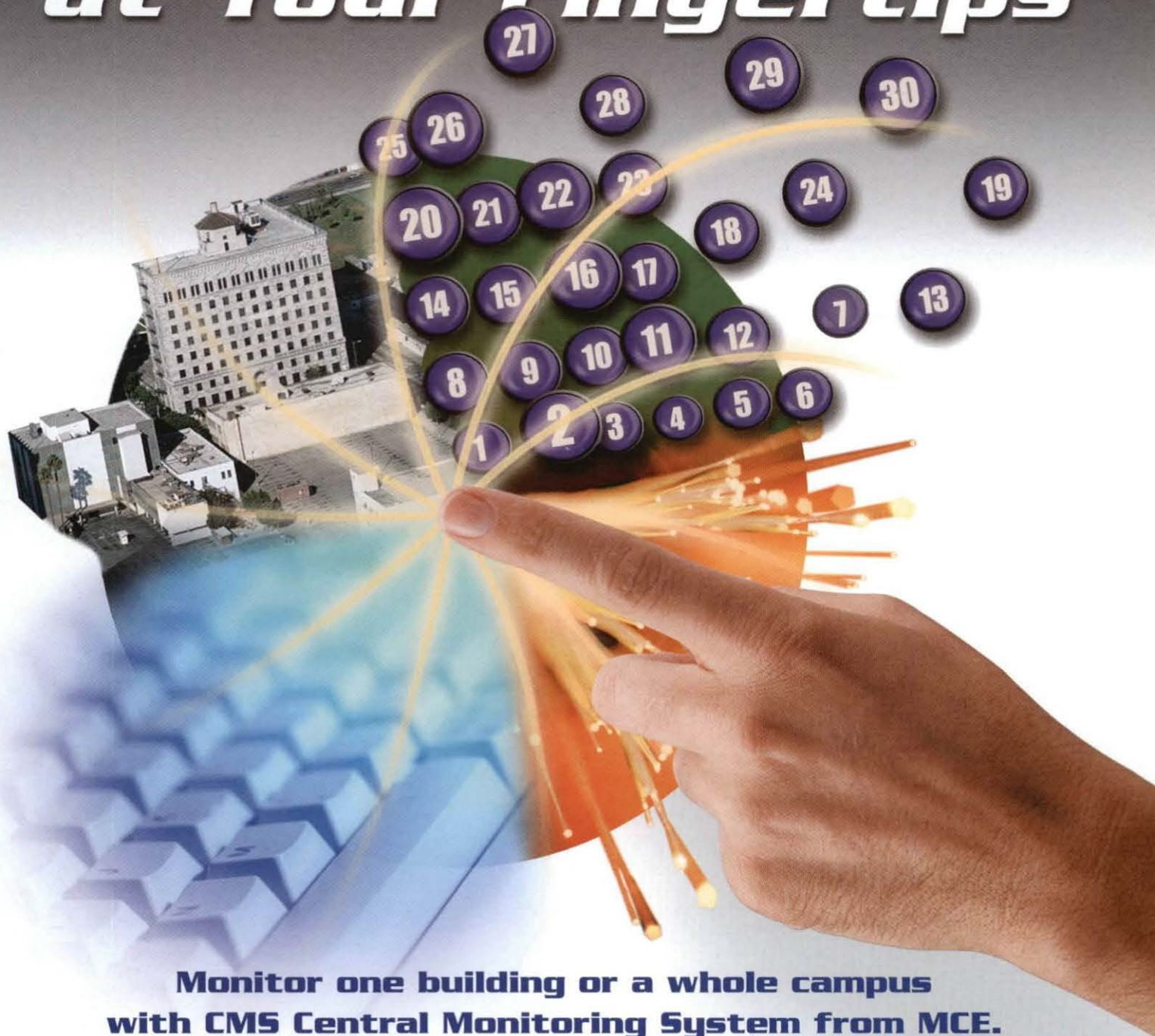
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SOLUTIONS



by H. Val Peterson

How would the following multiple-choice questions be answered by the faculty and administration at your institution?

The Facilities Management Department: (circle one)

- A. Is where the guy who never smiles works.
- B. Sends people over to fix the air conditioning.
- C. Represents an enormous drain on the institution's budget.
- D. Is critical to the educational process.

While there may be an element of truth in all of the answers, it would be encouraging if choice D was the answer selected to best describe the facilities management organization. There should be no question that the facilities management group plays a vital role in enhancing the educational process by creating and maintaining a physical environment that is conducive to learning.

Few would argue that learning conditions are affected and significantly diminished when the following conditions exist:

- the classroom is littered and dirty;
- the temperature is too hot or too cold;
- the air quality is poor;
- the lighting is inadequate;
- the equipment doesn't work;
- the room is painted a "depressing" color and the paint is peeling;
- the writing arm on the student's chair is missing; or
- the instructor's notations on the chalkboard are too light to read.

Val Peterson is director of facilities management at Arizona State University, Tempe, Arizona, and a past APPA President. He writes the Focus on Management column for Facilities Manager and can be reached at valpeterson@asu.edu.

It should be obvious to all that the facilities management organization has the capacity to positively influence the learning environment through the conscientious delivery of appropriate operations and maintenance services.

At one time or another, most education institutions have established a priority to enhance the educational experience of students. This goal is accomplished through a variety of initiatives which might include hiring additional faculty, renovating existing facilities, constructing new facilities, and utilizing advances in technology. Far too often, to the detriment of the overall learning environment, the facilities operating budget is tapped to help fund some of these initiatives.

Most implemented initiatives have in fact been proven effective in creating an enhanced learning environment. But I am firmly convinced that there are other alternatives—which might be termed "low tech" and considerably less expensive—that can also enhance the learning environment. One such alternative might be the establishment of a learning community, wherein all members of the institutional community contribute in simple, but effective, ways to the learning environment.

The Learning Community

As institutions of learning have grown rapidly and as social mores have changed, it seems to me that the campus has lost its sense of community, particularly as it relates to the learning community. A learning community is one where members show mutual regard for the needs and interests of one another, where aid and support are freely extended, and where each person considers the impact of his or her actions on other persons. Members of a learning community are concerned about how their actions contribute to or detract from the creation of supportive settings for teaching and learning.

It is a fact that the condition of classrooms and laboratories need to be continually upgraded and maintained in such condition as to foster an effective teaching and learning environment. Most institutions have a plan that attempts to address the physical condition and adequacy of the classrooms and laboratories through ongoing remodeling and renovation work. But this effort is not enough.

In addition to upgrading and remodeling, the condition of the facilities need to be maintained, and even improved, by the introduction of an effective anti-litter campaign and the support of adequate resources to clean and maintain the facilities so that those who come and go on a daily basis are not tempted to deface, vandalize, or destroy them. I once had a student, speaking about his dorm room, tell me, "If it looks like a pig pen, we will treat it like a pig pen."

While adequate maintenance and anti-litter campaigns are good, needed, and essential in maintaining a good learning environment, it is still not enough. These efforts deal with the symptoms of the problem but not with its underlying causes. The causes may be found in our failure to seriously think of ourselves as a learning community.

As part of a larger effort to establish and sustain a learning community, all students, staff, faculty, and even visitors should be asked to take steps to ensure that others are not

distracted by offensive sights and smells, by litter that shows a careless disregard for the environment in which teaching and learning takes place, and by noise and other unnecessary sounds that divert attention or detract from the tasks of teaching and learning.

While students and staff can play a major role in supporting the learning environment, it is the instructional staff that must accept the primary responsibility for serving as the conscience of the learning community, showing by word and by example how a vigorous and effective learning community is created and maintained. Instructional staff should take the lead in teaching students not only the content of the scheduled course, but the need to create and maintain a setting that is conducive to learning.

To this end, the acceptance of some simple rules of etiquette that would help engender pleasantness and mutual regard in the learning environment would be appropriate. Some of these rules might be:

- Take out of the classroom everything brought into it, and keep or dispose of it properly;
- Leave the classroom in good order for those who will use it next, including the arrangement of furniture, erasure of chalkboards or whiteboards, and the return of equipment;



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- Guard against loud or raucous noise and behavior in the classrooms and hallways, always showing consideration for classes in session;
- Follow the use and care rules established for the particular building or classroom where classes take place; and
- Show regard for and assist others who are trying to promote a caring and vital learning community.

There is, of course, much more to fostering a learning community than these few simple rules for classroom etiquette. The capacity of individuals to adhere to these few simple rules, however, says much about their willingness to take the larger steps that may be necessary to sustain a stimulating and caring setting for learning.

Instructional staff that take pride in their teaching and their effectiveness as a teacher, should be concerned about the quality of their teaching environment. While it may be easy to complain about support for instructional programs and the cleanliness of the classrooms and to focus blame on someone else, simply complaining and pointing fingers will not result in clean classrooms.

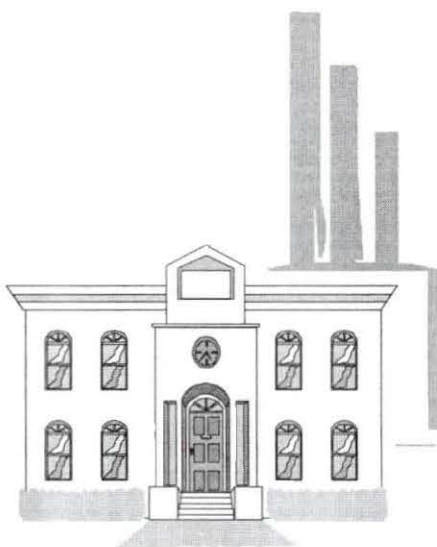
Educational institutions seem to have lost a sense of community on the campus as almost everyone seems to be engaged in an individualistic approach. Without a regained sense of commitment to the whole and not just some small part, no matter how insignificant the part may be, the learning and teaching environment is likely to get worse for everyone, particularly students and instructional staff.

Everyone connected with the institution should think of themselves as members of a community of learning, a special community of individuals engaged in one of the most worthwhile activities of life, that activity being education. Higher education ought to reflect a higher set of standards, a higher set of principles, a higher sense of community, a community in which everyone is valued and treated with dignity and respect, and a community where everyone takes pride in and value for what they do.

The Role of Each Stakeholder Group

It is assumed that clean, well-maintained, state-of-the-art teaching facilities are

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important to the mission of every institution of higher education. Furthermore, it is believed that such conditions can be maintained with sustained effort on the part of instructional staff and students and with the support of the facilities management organizations, facility development programs and the administration. The role of each of their groups or units is outlined as follows:

Facilities Management Organization The facilities group has major responsibility for cleaning and maintaining the entire campus, including facilities that accommodate teaching. Classrooms must be cleaned daily and repairs (e.g., broken furniture, burnt-out light bulbs, window coverings, etc.) are made on a timely basis. It should be recognized that the schedule for maintenance work is heavily influenced by the availability of maintenance funds.

Instructional Staff While the facilities organization can be expected to clean classrooms daily and regularly maintain them, it cannot be expected to clean them between classes throughout the day and evening. Instructional staff must play a key role in helping keep the classroom in an acceptable manner for those that follows. This can be done by erasing the chalkboards or whiteboards at the end of class and requesting that students remove trash and litter they personally brought to class. It is equally important

that each instructor assume the responsibility to leave the seating appropriately arranged, no posters placed on the walls or door, and lights turned off at the end of class. If the instructor approves the use of food and drink in the classroom, he or she should also take the responsibility to ensure removal of resulting debris.

Students It is obvious that students enjoy the privilege of bringing food and drink into the classroom. Before leaving the room, however, the student should assume the responsibility of cleaning up after himself or herself. Student organizations, particularly student government, should take an active roll in promoting the notion that students should be more attentive to and responsible for putting their trash in the waste containers provided and to only post flyers and notices on approved bulletin boards—not on walls or doors. The student newspaper should be involved in reminding students and others to respect their peers and associates by not leaving trash in the classroom or elsewhere on campus.

Faculty Development Programs Most institutions sponsor programs to help instructional staff improve their teaching techniques. Faculty and teaching assistants should be trained and instructed on what they can do to create and foster a sense of community and of their role in helping keep clean the teaching facilities.

Administration The institution's administration should make a priority to develop a sense of commitment to the philosophy of "community" involvement in providing clean classrooms and the resources necessary to support this effort. It is envisioned that additional resources would be minimal, if any, to adopt this

program and its philosophy. A commitment is critical, however, to provide resources adequate to continually improve teaching facilities and to develop additional quality, state-of-the-art space in new facilities.

While to some this matter may seem trivial and mundane when viewed beside more prominent issues, unsightly and littered classrooms and laboratories are nevertheless a major distraction to the learning environment. It is a documented fact that the attractiveness of the physical environment plays a major role in attracting and retaining students and faculty. The physical environment obviously includes conditions within campus classrooms and laboratories as well as



the landscaping, campus grounds and the building themselves.

Each education institution has within its capacity, without expending additional funds, the ability to significantly enhance the learning environment on campus. With all entities working together—administrators, students, instruction staff and the facilities management organization—the learning community can become a reality. On most campuses it will take some time to get organized, to communicate the plan, and to change old habits and practices. However, with a commitment from all levels within the institutions, the learning community can happen.

We need to recognize that to implement the concept of a learning community requires a departure from current practices. Other things are changing all around us. Why not change our attitude about how best to create a quality learning environment? 🏰

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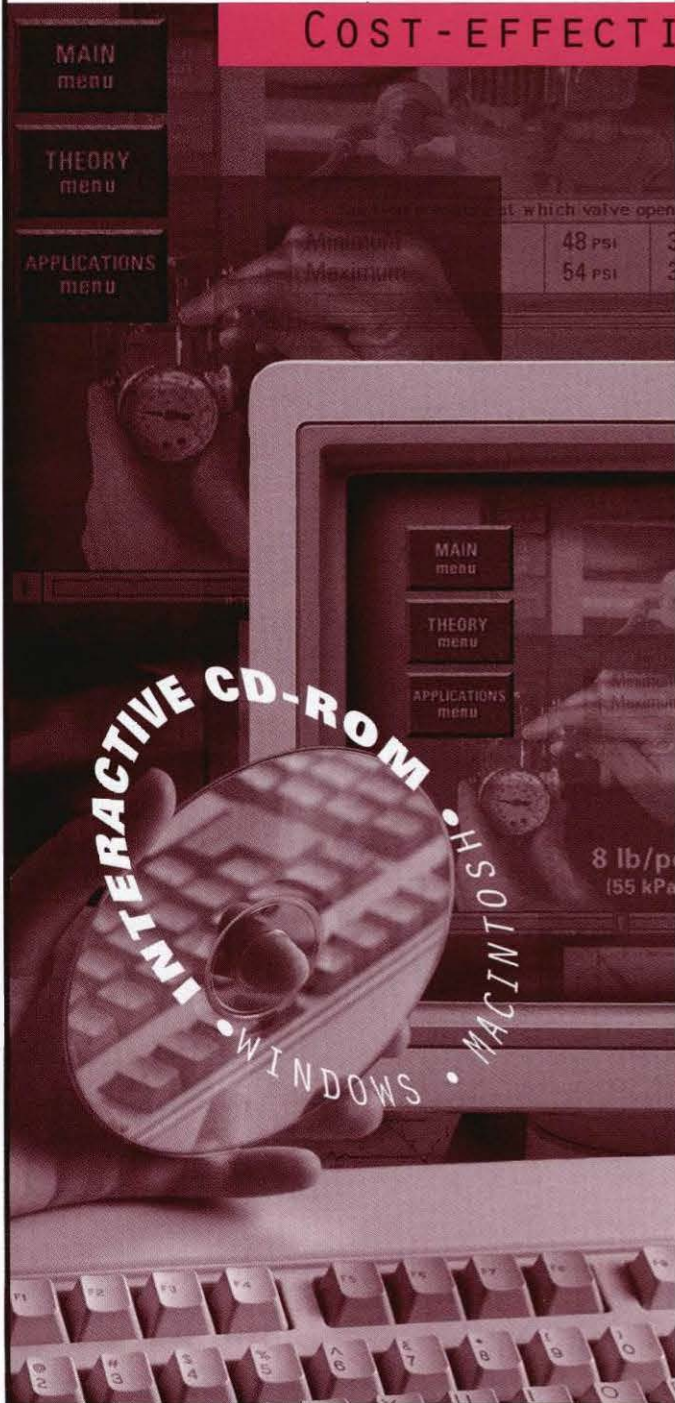
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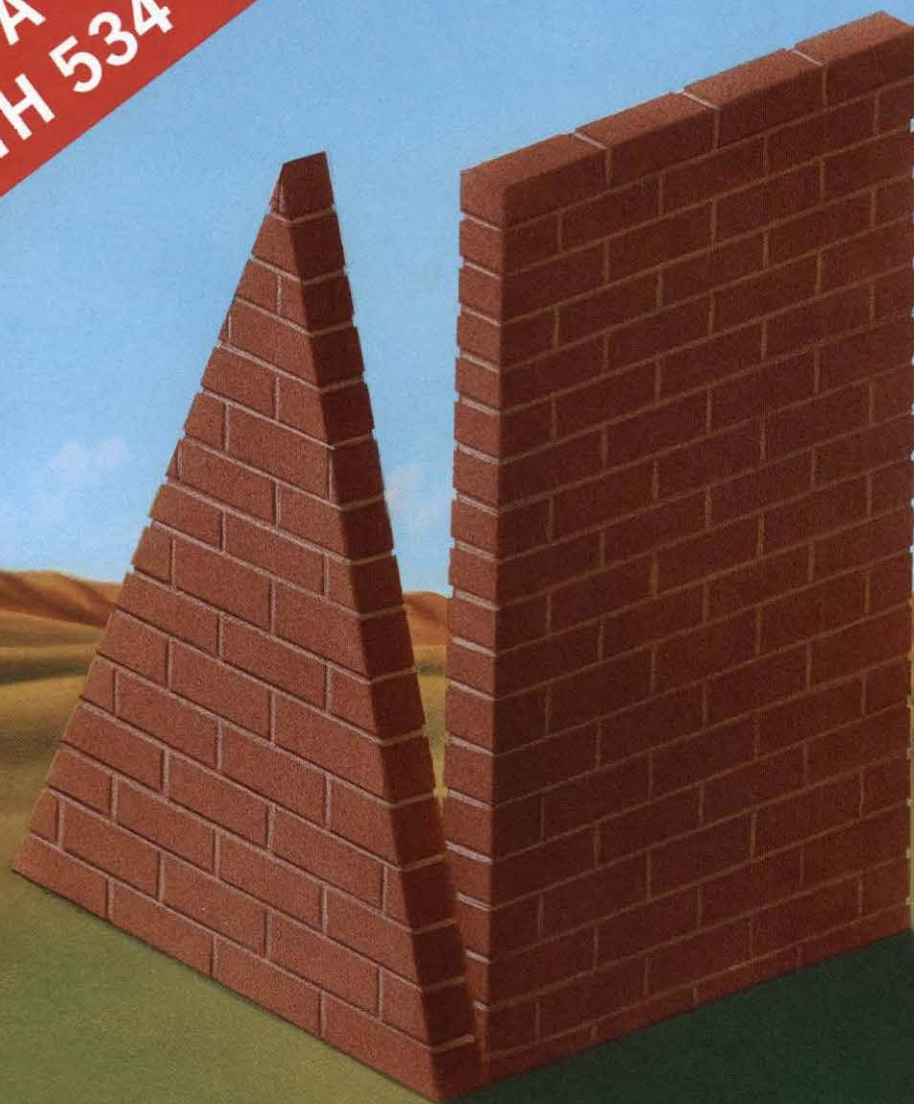
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The Value of Relationships



by Charles W. Jenkins

Someone once suggested that all learning occurs through one of two processes. The first is the “ah-hah” experience. That’s when we finally grasp a new concept and the light bulb comes on over our head. The second process is the BFO, or blinding flash of the obvious. After studying the topic of individual leadership for many years, I had a BFO experience. I discerned that leadership is all about building and nurturing relationships with other people. You can’t lead in a vacuum. Leaders are leaders only because they have followers, and that means lots of one-to-one relationships. Several relationships in our business lives (and certainly in our marital and family relationships) can make us feel marvelous or miserable, depending on the shape they’re in. Let’s explore a few of them.

Relations with the Customers

Where better to begin than with customer relations? But I’m not referring to the relationship between your departmental staff and your customers. We bring in consultants to train the staff in customer relations or send the staff off to charm school to learn all the ways and ploys of making the

customers think they’re happy. Instead, I’m asking, “What is your personal relationship with your customers?”

There was a time when I saw myself as a cool, efficient solver of problems for other people in the university. Sort of like *Dragnet*’s Sgt. Joe Friday as portrayed by Jack Webb. You know, “Just the facts, ma’am. Tell me your problem in as few words as possible so I can get about the business of solving it.” I had no time for chit-chat.

Then we began to survey our customers periodically to measure their level of satisfaction with our service. Two comments in our very first survey were aimed directly at me. One said, “The director is socially pleasant; however, administrative relating is often curt or abrasive.” Another observed, “The structure is too exclusively militaristic, with the highest management, the director, only responding to VPs (in specified order) but rarely with deans.” Before I finally saw the light, my response to those comments was that I simply don’t suffer fools and a couple of them had noticed. Pretty arrogant, wasn’t I?

If you should see a little of yourself in this description please consider carefully what follows. Let me assure you that you’ll like yourself better and be better liked by others if you will suffer those fools gladly. Stephen Covey calls it “listening empathically” and promotes the practice in the fifth habit of highly effective people, which is “Seek first to understand, then to be understood.”¹ I try hard to do that now. I didn’t change overnight, mind you. It came slowly and not so easily. One encounter stays indelibly in my mind, though, as a watershed experience in my growth to be more empathic with our customers.

Charlie Jenkins is the retired facilities administrator at Saint Mary’s University and a past APPA President. He currently is president of the Jenkins Resource Group, based in Fair Oaks Ranch, Texas, and can be reached at jenrsc@aol.com.

We had just reopened a faculty office building that had been closed for remodeling for over a year. One department, some 15 professors, was to move from an adjacent building to the remodeled one. The department chairperson and I had agreed on a move date, and I had arranged for a local mover to send a crew to get it done in a single day. All was on track. A few days before the scheduled move I was stopped during one of my campus walkabouts by one of the department's professors. "Oh, Mr. Jenkins," he said, "I can't possibly move on the day you have scheduled." Did I react negatively? Not at all. I had prepared for just this eventuality. "No problem, Professor," said I, "if you can't move on our day, we'll move you on the day you say." (We could put together a crew of housekeepers to move a single office.) "Oh, but Mr. Jenkins, I'll be far too busy on the scheduled move day. I have exams to grade and students to counsel and I simply can't reschedule those things," he went on. "Please, Professor, you didn't understand what I said," I replied, "you can move on any day you want." Finally, he acknowledged my message and agreed to call the day before he was ready to move and so he did.

It was days before I finally got the message. He didn't just want to move on his own schedule. He wanted to hear himself convince me that the value and worth of his contribution to the university mission was far too great to be sidetracked by a move to a new office. Had I been patient enough to listen for just three or four more minutes he could have enjoyed that experience. As it was, I interrupted and solved what I perceived to be his problem and thus ended the encounter. He still hasn't had the satisfaction of justifying his existence to me. He doubtless still perceives me as curt and unsympathetic. Since that time, I force myself to listen more and talk less. It gets easier and easier.

So, if you fancy yourself a hard-driving, no-nonsense kind of manager like I did, maybe you can improve your style by learning to listen better. My relations with our customers sure improved when I did it. That's why I recommend it for your consideration.

Relations with the Staff

This section could go on forever, for such is its importance. I'll curtail it by offering just two observations regarding your relations with the staff. Remember that they have been entrusted to your stewardship by your university, college, or school.

The first is a passage from a treatise that appeared in my e-mail box. I don't know who forwarded it to me but I'm glad

they did. It was put on the Internet by a Professor Louis Schmier from Valdosta State University in Georgia. Prof. Schmier shares his personal credo for relating to the students he teaches. I've paraphrased his thoughts to change the relationship from teacher- student to administrator-staff.

Rule One. Give a damn! Care! Love! Don't just mouth it, live it!

Rule Two. Don't come to work expecting the staff to fail. Expect them to perform and succeed.

Rule Three. A workforce is a "gathering of ones," of diverse, individual, sacred human beings.

Rule Four. No one in this "gathering" is dumb and unwanted. Nothing is as cathartic to self-esteem as the feeling, "I can do it" and "I belong here."

Rule Five. Every worker is entitled to the personal, equal dignity of a human being. Demand that each person respect himself or herself, and demand that each person treat everyone with respect.

Rule Six. No one's face gets erased. No one goes nameless. No one is left in the background. No one is allowed to be overshadowed by anyone else.

Rule Seven. Every worker starts with a clean slate. Don't judge a person by the ring in his ear or the tattoo on her arm or the whispers of other people or the accent of their speech or . . .

Rule Eight. Love every associate. It's okay to be disappointed or even frustrated with their lack of effort, but don't stop loving them as persons.

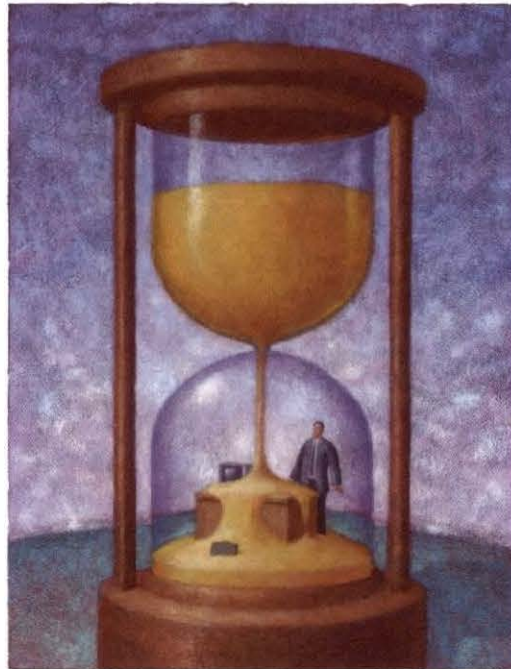
Rule Nine. Don't be afraid to let the workers know that you're trying something new to make them powerful

achievers and that you need their help.

Rule Ten. Remember that leadership is a journey. It's not an event or a destination. It's like climbing a mountain that has no summit to reach. You just have to learn to love climbing.

If Prof. Schmier is as good as he writes, his classes must always be overflowing. If we can incorporate his credo as ours, we'll be very successful as well. I suspect he makes every student feel as good as every other. The people we lead should feel the same way.

After W. Edwards Deming became famous as the father of statistical quality control, later amplified to Total Quality Management, he was much in demand as a speaker. I'm told that Deming frequently opened his speeches by telling the story of a Halloween party during his youth. Deming was on in years by this time, so it was no surprise for him to relate that all the Halloween costumes were homemade. You couldn't just pop in to K-Mart and become a mutant ninja salamander or whatever back in those days.



So, the kids all came to the party in their Mom-made costumes, and there was great interest and hilarity as they admired each others' getups. Then, someone announced that there would be a contest and prizes would be awarded for the best costumes. Immediately, the atmosphere changed. Now, the kids began to compare their costume with the others and to speculate as to who might win. Now, the mental rank-ordering began, with its faithful companions jealousy and envy. What had been a pleasant, convivial atmosphere became tense and competitive. Deming closed this story with the plaintive question, "Why does someone always have to win?"

Dr. Deming's point, of course, is that our challenge is to make *everyone* feel like a winner. Leaders find a way to do that.

Relations with Vendors and Suppliers

What is the respect/contempt ratio between you and the private sector people who have a stake in your success? These are the business partners who make sure that you get goods and services from them dependably and at a fair price. Do they feel a part of your team, or do they perhaps consider you a one-way, slow-pay kind of customer who wants every consideration from them while returning little, if any?

In his best-selling book *Swim with the Sharks without Being Eaten Alive*², Harvey Mackay includes a short chapter entitled "Treat Your Suppliers the Way You Treat Your Customers." He tells of a certain advertising executive's experience with the Billy Graham organization. The man happened to be momentarily in a business slump and needed work badly. After he did some public relations work for Billy Graham, he was called by the responsible BG officer and asked to bring over his bill. He put it together very carefully and took it to the BG offices. With hardly a glance at it, the officer had his check cut on the spot and delivered to him before he left the building. Mackay then asks, "Where do they tell you in business school to pay your suppliers when they hand you the bill? Aren't we supposed to hang on to our cash as long as possible and work the interest for the maximum return? Did anyone ever chew out his controller because he paid a supplier too late?"

BG did other considerate things for this vendor and later, when his business was

back on its feet, he sent them a large contribution and has continued to do so regularly. Mackay implies that BG treats everyone the way they treated the advertiser and comments, "BG has recognized a business principle that is so elementary, so corny, that we seldom ever use it: If you expect the other guy to care about you, show that you care about him. Sounds pretty close to that Golden Rule business again, but does it ever work for BG. Simply stated, they are regarded as the finest account in town, not just because of the way they pay but also because of the quality of the people at BG. In fact, we're willing to take less just for the privilege of doing business with them."

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Don't get the idea that BG is pollyanna naive. They know the fair market value of their purchases. If you overcharge them, says Mackay, you'll be paid promptly—once. But you'll never hear from BG again.

Sounds pretty idealistic, I know. But if you apply the BG principle you can earn the same vendor loyalty that BG has, or close to it. We talk about our vendors being stakeholders just as much as the customers and staff. Why shouldn't we treat them with equal consideration?

Relations with Your Boss

Despite the admonition of today's management gurus to realign the organization into a flatter, less vertical structure, higher education has stoutly resisted. Our workplaces are regarded as the last bastion of the authoritarian, hierarchical, high-control organization. Therefore, for most of us, our relationship with our boss is one of primary importance. I have two thoughts about this relationship.

First, if your boss is one of the high control kind, I suggest a lesson from Stephen Covey. In *The Seven Habits of Highly Effective People*³ Covey tells of a firm he consulted with for several years. The president of the firm was a brilliant guy and everyone knew it. But he was very dictatorial, into micromanagement, and treated all his top executives like office boys.

Maybe you know a boss like that, a "do this, do that, if I want your opinion I'll tell you what it is" kind of person.

Well, of course, all this president's execs couldn't stand him and spent a lot of time at the water cooler discussing his idiosyncrasies. All, that is, except one. Call him Joe. Joe made it a point to fill in where the president was weak. He shielded his staff from the president's maladroitness and emphasized to them the president's strengths, such as vision, talent, and creativity. He was what is called a transition person. He short stopped the negative stuff about the boss and kept it from polluting his area of the firm. The boss treated Joe like all the rest. But when Joe was given a "do this" he would do more than the boss expected. He sensed the underlying concern behind his task, and when he presented his report he also gave his analysis of the data and recommendations that supported the analysis.

After this happened a few times, Covey says, the president quit treating Joe as a gofer. At staff meetings after that it was, "You do this, you do that and, by the way, Joe, what's your opinion regarding this issue?"

I know, I know, this guy sounds a lot like an apple-polisher. But he got results. Because he stepped out of line and took a higher road than his poor-mouthing peers, he benefited—and so did his work section and ultimately the entire firm. There's a powerful lesson there for relating to a dictatorial boss.

But, whether your boss is a princess or a pain-in-the-rear, this next bit of counsel I offer applies. It is this: Make sure your boss knows how good you are. The scriptures admonish us to not hide our light under a basket. A famous old exotic dancer coined the phrase, "If you've got it, flaunt it." For one of the best comments I know of on this topic, I turn again to Harvey Mackay.⁴

Harvey writes, "Self-esteem is a buzzword these days, and it's about time. The higher it is the better you get along with yourself, with others, and the more you'll accomplish. Humility is the most overrated of all human emotions. The two worst human failings, many of us were taught when we were young, were lying and bragging. I'd rather stick with Will Rogers, who said, 'If you done it, it ain't bragging.'"

Harvey talks about the self-confidence of top athletes and how baseball scouts refer to "the good face," a sense of self-confidence that radiates from winners. He admonishes his readers, "Don't let the optimism be snuffed out in you. It's a hell of a lot more productive than humility."

So let your boss and the rest of the world see that "good face." It will, indeed, allow

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But maybe you're thinking, "Hey, Charlie, that's just not me. I don't have an inferiority complex, I'm truly inferior." Right away I can tell there's a problem with your relationship with yourself. I can offer only one antidote for low self-esteem—challenge yourself and meet the challenge. Lose ten pounds and keep it off. Stop smoking—forever. Start a master's degree program. Teach a Sunday School class or volunteer at your local elementary school. Join the Habitat for Humanity effort in your local community. The opportunities go on and on. And here's my best suggestion. Mend a relationship that's broken, or strengthen one that's weak. On the job, at home, wherever.

Do this in confidence with yourself, without fanfare. These small private victories, accepting and meeting challenges, will cause your self esteem and confidence to soar. It will be obvious to those around you. Good things will follow.

One of the companies that puts out motivational signs and pictures for the workplace markets a picture of a great lion gazing into the camera. In the background, at a distance, is a gazelle. The gazelle is intently studying the lion. The caption reads:

In Africa, every morning a gazelle wakes up. He knows that today he must run faster than the fastest lion or he'll be killed. Every morning, a lion wakes up. He knows that he must run faster than the slowest gazelle or he'll starve. Whether you're a lion or a gazelle, when the sun comes up you'd better be running.

When you're out there running for survival, don't forget to build and nurture those relationships that make it easier to survive—and excel. 🏰

End Notes

1. Covey, Stephen R., *The Seven Habits of Highly Effective People*, Fireside, New York, 1989.
2. Mackay, Harvey, *Swim With the Sharks Without Being Eaten Alive*, William Morrow & Co., Inc., New York, 1988.
3. Covey, Note 1.
4. Mackay, Note 2.



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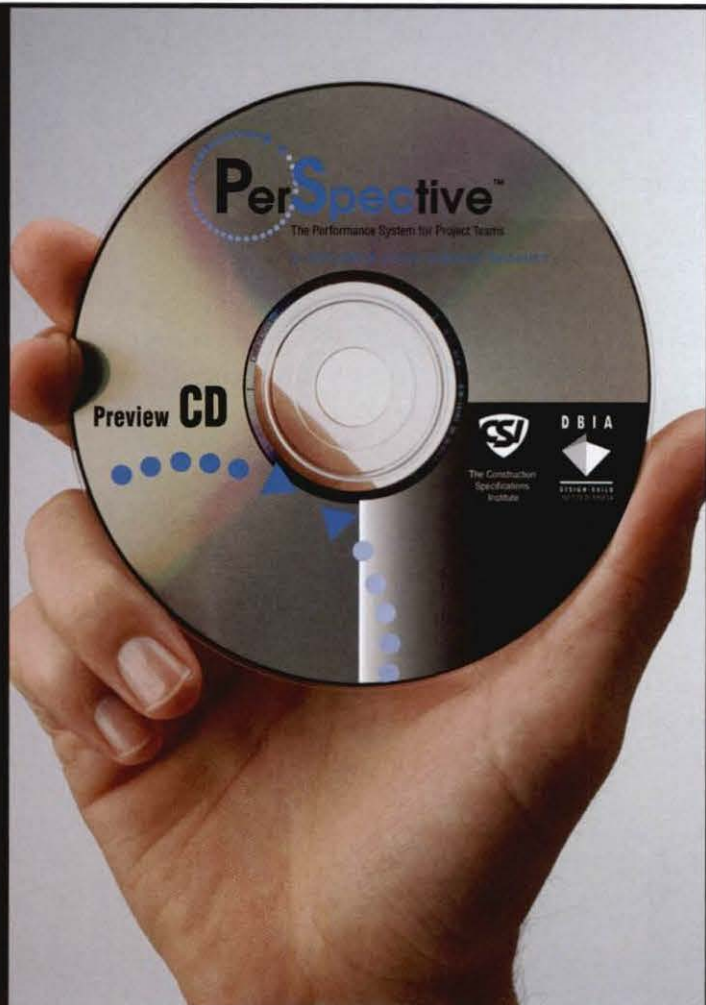
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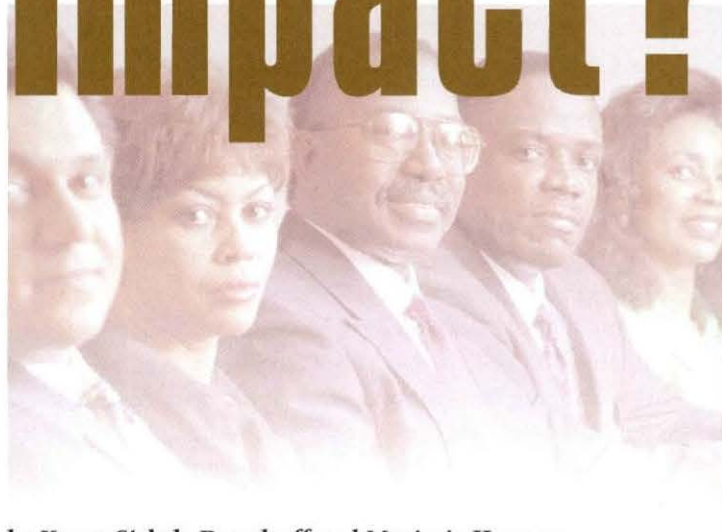
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Diversity Training: *Does It Make a Positive* Impact?



by Karen Sickels Deardorff and Marjorie Heyman

Bill excitedly opens the envelope from the Training and Development Department, certain that he will find a memo confirming his attendance at a highly lauded, three-day boiler seminar in Orlando in May. Since Bill has been working on the boilers for five years without any formal training, he is especially looking forward to attending this seminar and enhancing his technical skills. While his coworkers have shown him everything they know about boilers, Bill realizes that it is not only critical to know how to repair the existing equipment, but he also must get and stay current with rapidly changing technology.

Bill's supervisor does not support or provide training opportunities. Many times the employees in Bill's area have not pursued training opportunities because their boss insinuates that their absence causes a hardship on the whole shop. It simply was not worth the hassle. However, at a recent shop meeting, the new training director promised that things were going to change. Management had pledged that employees, in

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all areas, are going to be attending a variety of schools to receive the technical training needed on their jobs. And even though Bill hears almost daily how his absence is going to harm his coworkers, he has decided that this training opportunity is just too good to pass up.

Imagine Bill's shock and anger when he reads the first line of the memo from the Training Department: "You are scheduled to attend a diversity awareness training course on June 2, from 8:00 a.m. to 5:00 p.m." How can this be! The employees don't need someone telling us how to think and how to act—we already know all this stuff. What we really need are technical training skills!

Bill knows he can most likely forget about the boiler seminar now. If everyone has to attend this diversity training, there is no way his supervisor is going to let him off the job for three more days. What is upper management thinking? For once, Bill can agree with his supervisor. This diversity training is a waste of time.

Many employees perceive diversity awareness training as useless fluff, a waste of time, or something the other person needs. They can find numerous reasons why they should not have to attend diversity or cultural awareness training.

- "Why do I need this class?"
- "Why and how is this important to me and my work?"
- "It is too stressful *not* being at my job! The work piles up while I am gone."

- “They can make me be there, but they can’t make me participate!”
- “I do my job, I get along with everyone, I don’t have any problems!”

Even though few employees embrace attending such training, today’s multicultural workforce makes it imperative that these issues be addressed. Gone are the days when jobs in construction, trades, and business belong primarily to heterosexual white males. Soft (interpersonal) skills training is as important to the survival of a business as are the hard (technical) skills. Having an employee who is able to perform a task well, but who is not able to get along with anyone, does little to maintain (let alone increase) productivity or morale.

We faced similar negative reactions to those described above when we first began to train the entire Facilities Management staff at Ohio University in day-long workshops entitled “Working in Diverse Teams.” Some of the concerns and issues we faced from employees were quickly diminished as the training progressed. By the end of the workshop, most participants felt energized, were pleased with the day’s training, and most importantly to us, reflected upon their own position within the work unit. The employees understood better what they could do to enhance their working relations. A compilation of the class evaluation sheets indicated that 77 percent of the class found the training to be informative and useful to their workgroup.

We present our experiences as a case study, given that diversity training within academe is fairly new. The challenges presented by various workgroups are similar, but not the same, as those faced in the corporate world.

Diversity Training—An Overview

What is diversity awareness? Many people toss that phrase around as if there was common agreement as to its meaning. However, diversity is much more than just differences between people. In fact, diversity incorporates such dimensions as race, ethnicity, gender, age, disability status, religion, sexual orientation, language, personality, and economic and educational status. Workplace diversity is the recognition and valuing of all the differences, as well as the similarities, that exist among all individuals.

In some ways, valuing workplace diversity is analogous to a potluck dinner—everyone has something uniquely different to bring to the table. These differences as a whole present a balanced and far more interesting dinner than perhaps one person could cook. Valuing diversity is recognizing that everyone has their unique talents and experiences to bring to the work “table.”

The primary objectives associated with diversity training must be clearly conveyed to all participants. Our training had three primary objectives. First, all employees were to become self-aware; that is, participants would begin to understand what their personal values, ideals and ethics are, and to

determine their own sense of what is “right” or “wrong.” Each person began to identify what factors influenced the development and adoption of their values and ideals (such as one’s family, church, school and peers). Second, all participants began to recognize that their values controlled their behavior, and ultimately, their attitudes toward others. And finally, since misunderstandings and conflict often occur when one employee’s values and expectations are different than another employee’s, all participants were given the opportunity to learn useful skills to initiate and maintain open communication channels with coworkers.

The Classroom—A Mixed Group

Facilities Management at Ohio University is responsible for maintaining over 190 buildings and 1,200 acres of grounds. Given the nature of working with a diverse faculty and staff of over 3,500, a student body of over 19,500, and an increased female population among the trade groups, the director of facilities management requested that we design and conduct diversity training classes for his 350 employees.

To obtain a good representation of the employee base, our goal was to mix trade shop, clerical, upper management, custodial, and supervisory employees (representing bargaining unit, administrative, and non-bargaining unit) together. This created a diverse training group of different gender, educational levels, economic status, race, and ethnicity. A total of 299 employees were trained during fourteen day-long sessions. Each session had an average of 24 participants.

Feedback from workshop participants was overwhelmingly positive to these mixed groups. Employees enjoyed the chance to learn more about their coworkers from different shops and areas, and for some, it provided an opportunity to get to know people who could potentially be their work colleagues in the future. Approximately 87 percent of the participants indicated that they enjoyed meeting and talking with coworkers during the training sessions.

We also want to point out that this was the first training of this type ever conducted for an entire department on campus, let alone for Facilities Management employees. A combination of lectures, small and large group discussions, interactive theater, team building exercises (BARNGA and Lego Jeopardy), and videos (*A Class Divided* and *The Tale of O*) were used. See the sidebar on page 28 for more information on the resources we used.

The Five Modules of the Diversity Program

The diversity workshop was divided into five modules, each tied to specific objectives and key learnings for classroom participants. Our goal was for participants to become aware of the basis of their own belief and value systems through classroom discussions, insights gained from the videos, interactive theater presentations, and the

mini-lectures. The objectives of the course were for each participant to:

- Gain cultural self-awareness; recognize that values and culture control behavior
- Recognize and evaluate situations where values and expectations conflict with those held by others
- Learn and practice skills to improve communication and understanding in conflict situations and improve working relationships

Module One introduced the class to the overall workshop objectives and was immediately followed by the card game, BARNGA. This opening served two purposes: it thrust participants into an experiential setting that demonstrated why recognizing differences in another person's values and perspectives is critical, and it served to quickly energize the class early in the morning.

Module Two expanded on the overall concept of diversity, identifying those diversity dimensions in which people can differ such as race, ethnicity, sexual orientation, age, gender, ability, status, and so on. The group was divided in half and each subgroup charted key characteristics of the ideal employee versus those of the ideal manager/supervisor, based on the Keirsey-Bates personality dimension categories. Finally, each individual scored themselves on the Keirsey-Bates assessment test, which had been taken several days before the workshops. Participants then compared their identified "ideal" employee and manager traits with their own score. The major objective of this module was to help participants better understand their own work style and compare it to other coworkers.

Additionally, some people began to recognize that their work style and behavior style were in part tied to their own values, as well as the values of their employer. Employees and managers were surprised to learn that they agreed on many of the character traits associated with being an "ideal" employee or manager. This realization provided an avenue for discussion about how they were so similar, but how they were perceived to be so different in their ideologies.

Module Three explored how work styles and behaviors can lead to misunderstandings and conflict. The dynamics of diversity was illustrated using interactive theater presentations. Interactive theater involves using volunteer actors from the class

participants to role-play problematic situations. We presented two separate scenarios—one dealing with mixed gender work group issues, and one dealing with work team partners who had opposite work styles as identified by the Keirsey-Bates categories.

This activity helped the class participants apply the information they had learned in Modules One and Two. Once the actors had preformed their scenarios, participants were encouraged to ask questions to clarify the situation and to offer suggestions for resolution of the conflicts or problems. This exercise provided participants with a first-hand look at differences in work styles and management practices and asked

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them to apply what they had learned to deal with those differences.

Module Four began an in-depth examination of stereotypes and how we develop them based on our own perception of what is "right" versus what is "wrong." One powerful video that still has an impact on people is *A Class Divided* (also known as the blue-eyed/brown-eyed experiment). While this video deals with how racial stereotypes affects young children, we asked our participants to think outside the parameters of racial issues. As a result, the group discussed their observations and reactions to the video and attempted to identify what similar barriers might be created at work between

Resources for Diversity Training

BARNGA, a globally recognized, cross-cultural communication game, was created by Sivasailam "Thiagi" Thiagarajan. Thiagi has written several hundred articles for training publications, including *ASTD's Training & Development Handbook* and the *American Management Association's Human Resources Management and Development Handbook*. A modified deck of standard playing cards are used in the game. The object of the game is for teams to devise a strategy to win as many tricks as possible without using verbal or written communication.

Lego Jeopardy was created by the facilitators to demonstrate the importance of communication and teamwork. The exercise involves having teams of four or five people construct an exact replica Lego structure from the pieces given to them. Only the captain of the team could look at a finished Lego model built by the facilitators, and all instructions had to be given without written or verbal communication.

A Class Divided was the result of a 1970 experiment developed by Jane Elliott, an elementary school teacher. She divided her third grade class between those with blue eyes and those with brown eyes. By giving the blue-eyed children preferential treatment one day, and the brown-eyed children preferential treatment another day, she showed the class what it felt like to be discriminated against because of race (or eye color). The video is produced by Yale University Films.

The Tale of O was developed based on Dr. Rosabeth Kanter's book, *Men and Women of the Corporation*. Dr. Kanter used the symbol "X" to designate the majority in the workplace and the symbol "O" to designate the minorities. This video explores the consequences of being different and how it affects some people's performance in work groups. The video is produced by Goodmeasure, Inc.

people from different racial or ethnic backgrounds, religions, ability status, or gender. The group also began to discuss what barriers were in place in the workplace that negatively affected work relationships and productivity. This discussion provided a transition into the final module of the day which examined teamwork and communication issues.

Module Five incorporated elements critical to effective teamwork with an emphasis on the major role that communication plays in workplace relationships. Lego Jeopardy illustrated the major components of teamwork and how people can communicate beyond words through their actions and body language. The final group of exercises in this module allowed the class, in groups of six or seven, to openly air their concerns and ideas for a more effective work environment. Participants identified those diversity issues that were crucial to them, both in terms of their jobs, and in their role as employees or supervisors.

The Up Side of Diversity Training

Despite the early morning trepidation and uncertainty encountered during the diversity training seminars, there were numerous positive results. Comments shared by employees during the seminars and even a year after include:

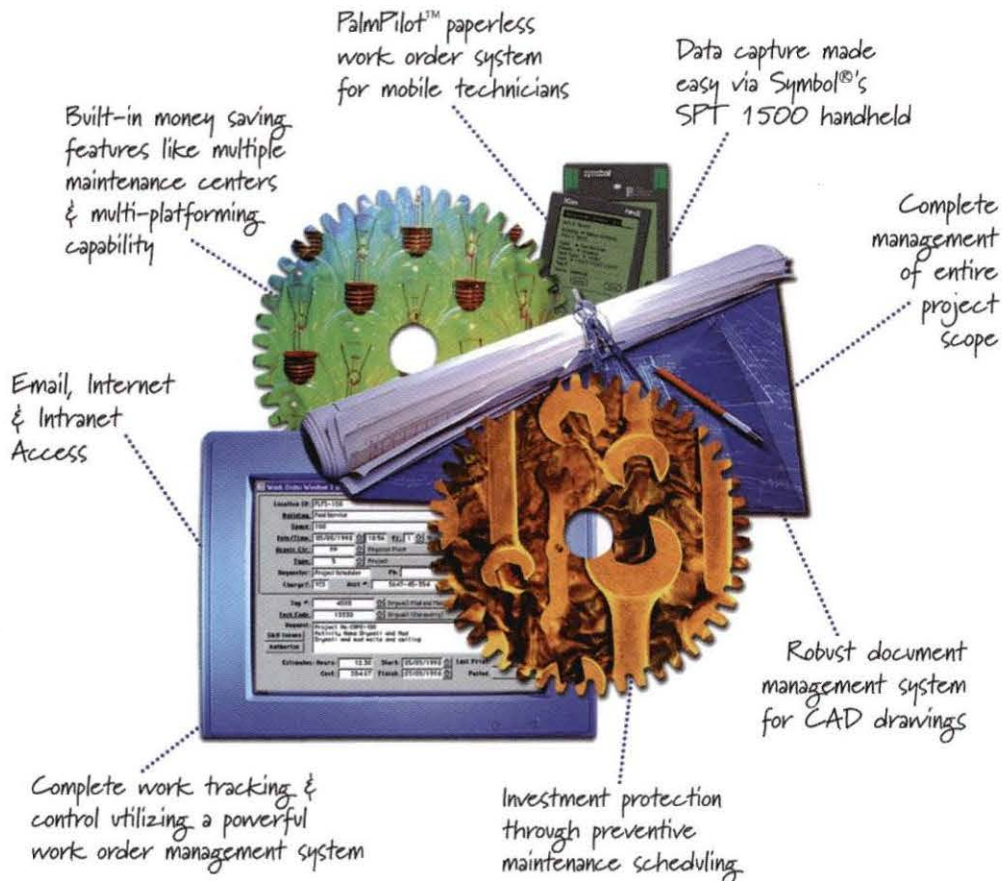
- "A *Class Divided* really showed how it feels to be treated differently because you are a different color. I have never been able to put into words what that video was able to convey. That's how it feels to be African American."
- "After watching *A Class Divided*, it made me really understand how people can feel hurt and angry after living through that for a lifetime. It will make me think twice about how I treat people of different race, religion, gender, and ethnicity from now on."
- "Thank you for making me feel like my opinions and feelings count. It's nice to know someone cares about how we feel."
- "The card game (BARNGA) and the Keirse-Bates assessment were excellent tools for showing how people have individual work styles. I now understand why I get frustrated with coworkers who react and interact differently."

While the seminars did not address or solve all the problems, we believe they have made a difference. This is supported by recent comments from employees that they still remember the lessons learned from the videos and the team building exercises. For example, one of the participants told us, "After watching *A Tale of O*, it made me realize how the only female in our shop must feel. We had not gone out of our way to make her feel a part of the team. I have made an effort to change that."

This difference can also be seen upon reviewing the bid sheets for a recent maintenance repair worker training class. Two years ago a similar class had three women and nine men

Continued on page 30

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enrolled. The enrollment breakdown for the current class started with six women and six men (two of the women have since dropped out of the class; one due to a medical problem and one due to scheduling difficulties). Likewise, an Electricity for Non-Electricians class has seen an increase of five women in last year's class from the previous year. As indicated by the demographic changes in the enrollment figures for classes, the trade shops are becoming more accepting of gender diversity and are being perceived as having a friendlier work environment.

The seminars appear to have accomplished far more than raising cultural awareness. They offered employees the opportunity to meet other employees from different shops and areas, the chance to learn more about coworkers, and the chance to explore and examine their own values and beliefs. They provided an avenue to air frustrations with fellow coworkers and supervisors, and they offered an avenue for making suggestions to improve productivity, working conditions, and customer satisfaction. The Keirsey-Bates Assessment provided both managers and employees with tools to positively interact with each other and to understand why there are differences in work styles and behaviors. And, the "styles" identified afforded management an inside look at how to motivate and communicate with their employees.

Additionally, the training gave employees a chance to express their pride in being part of Ohio University and Facilities Management and in the satisfaction of jobs well done. We believe that the employees are cautiously optimistic that the future will embrace a more diverse and accepting workforce.

The Down Side of Diversity Training

As with any training program, there are potential pitfalls when presenting a diversity training program at an institution. How the program is rolled out in a department will certainly affect the way it is viewed and received by the employees. If the program is presented as a way to address problems that are occurring in the workplace, some employees may be left with the impression that they (and not management) are viewed as the source of the problem. There will likely be great resistance on the part of some units within the department to attend the training.

On the other hand, if the program is presented positively as one way to increase or enhance existing workplace effectiveness and employee interaction, then the likelihood of success increases. It is critical to involve all employment levels in a department or organization, from entry level to upper management, and have them attend the training sessions together. This also signals to the employees that they are not solely responsible or to blame for whatever problems are occurring in

the workplace. Since supervisors or managers set the tone and serve as role models for their employees, it is essential that they "walk the talk." How supervisors and managers interact with, and respond to, people inside and outside their work group will be observed by others.

Finally, it is important to remember that the program is not a quick-fix, a one-size-fits-all solution for improving employee morale and enhancing workplace interactions. Follow-up training in skill areas such as performance evaluations, communication, conflict resolution and career development and enrichment will be necessary to ensure thorough integration of the diversity program's objectives into the work habits of all employees.

Creating a More Effective Program

Facilitators can enhance the success of any diversity program if the Four "F" principle is used: Fast, Flexible, Follow-up, and Friendly.

Fast: Sitting in a chair for eight hours and listening to someone lecture will numb most people's brain, no matter how dynamic the



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speaker. Let's face it, many people would rather discuss an idea than listen to one person's perspective on it. Participants are more likely to "keep on their toes" in a faster-paced setting, with short lectures interspersed with longer group discussions and activities.

Flexible: Both the facilitator(s) and the workshop must remain flexible and open to the unexpected. For example, formatting changes were made during the course of the workshops based on feedback received from participant evaluation forms. The Lego Jeopardy exercise was introduced about halfway through the sessions as it became apparent more team-building, activity-oriented exercises were needed. Many of our participants were not used to sitting in an office for any length of time, so changes in activity level and format were critical to keeping participant's attention and enthusiasm high.

Follow-up: This type of training is a great beginning, but one day will not solve a department's problems. The class should always be viewed as a first step in an ongoing process to improve the department's climate. Employees should be encouraged to initiate and attend follow-up training and meetings and to be part of action-solution teams to address identified issues and concerns. For example, shortly after these diversity sessions, the director of facilities management implemented an Employee Involvement Committee. This committee comprises 25 representatives from the different work groups and management. The function of this group is to provide an avenue to address rumors, employee concerns, and to solicit employee input on changes and suggestions for improving work processes. The committee has been well received by the employees and is having a positive impact on many of the communications issues raised during the diversity training.

Friendly: As facilitators, we sought to make the learning environment comfortable and friendly and to convey that we enjoyed interacting with the class participants. As a consequence, the majority of participants responded positively to us, as well as to each other. Participation in group discussions increased as the day's session continued, and often individuals would linger after the training session had ended to continue their conversations with us and other participants.

We did, however, encounter a few individuals throughout the training sessions who were disruptive by either challenging us as facilitators or by interrupting class discussions. It is critical that the facilitator maintain a sense of humor and his or her confidence during these times. It is

imperative to gently, but firmly, retain control of the classroom while maintaining the dignity of all involved. When a facilitator loses his or her temper, they also lose credibility in the eyes of the other class participants.

Where Do We Go From Here?

As we have stated, one day of training does not solve the problems within an organization that have taken years to accumulate. Follow-up interviews were conducted with a majority of trade shop employees, custodial staff, and supervision to assess areas in which they felt they needed skills training. Based on the response from those interviews, we plan to develop and deliver training in areas such as conflict management, teamwork, and enhanced interpersonal communication.

We also want to note that the university as a whole has recognized the need to provide "soft skills" training to employees. The Office of Professional Development is establishing professional development seminars for all employees that will cover topics similar to those we have identified, including manager/supervisory training skills. The authors have been asked to participate in a university-wide professional development committee where part of our role is to provide input for the development of those seminars. 🏛️

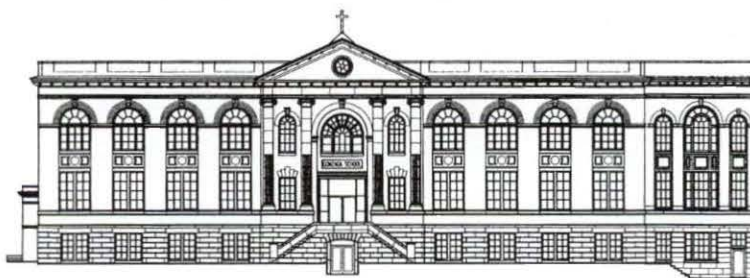
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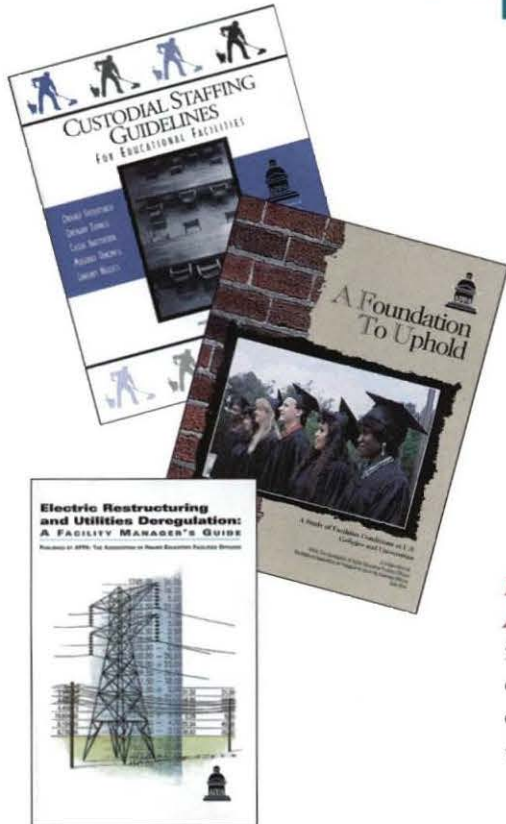
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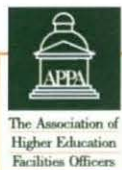
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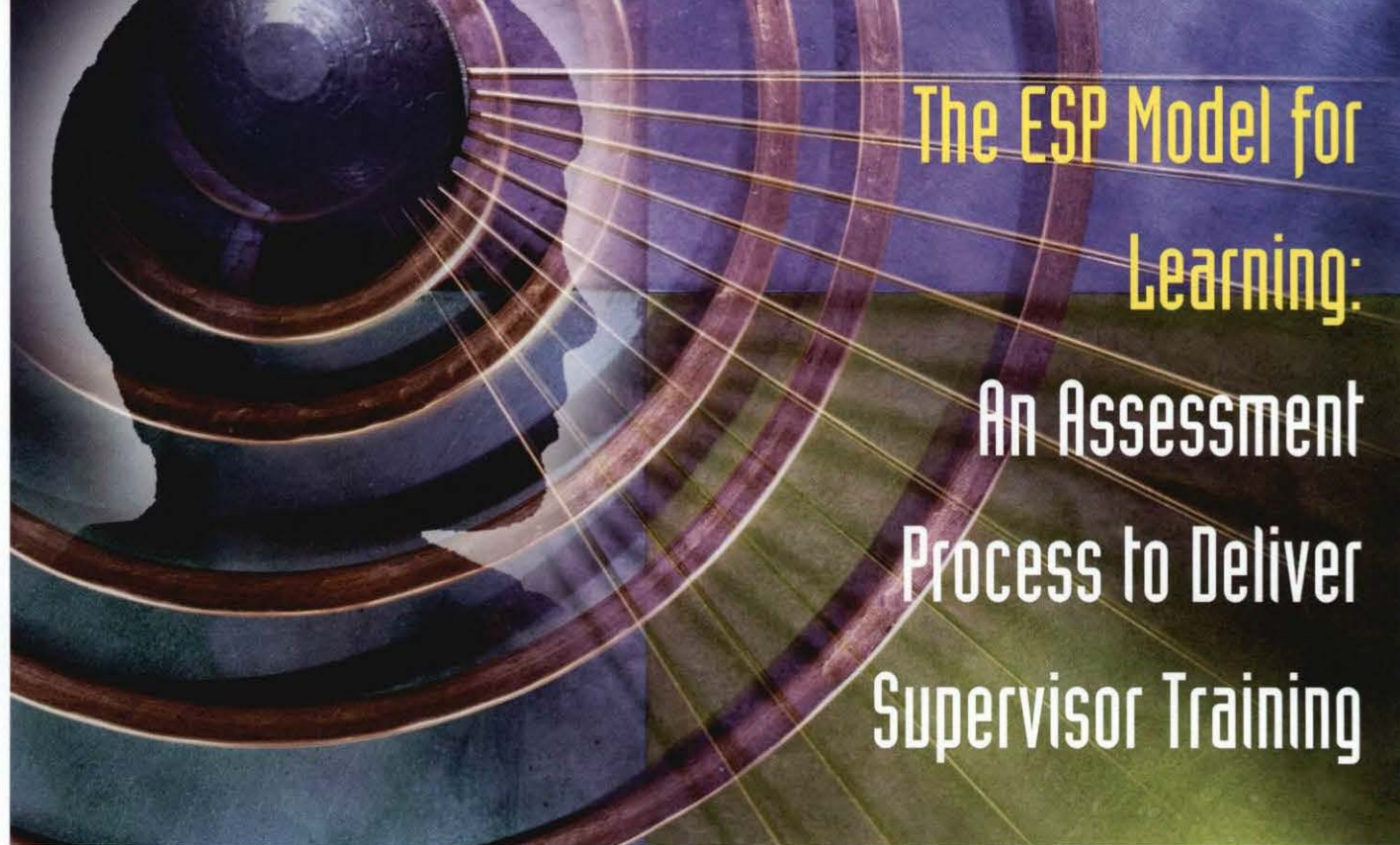
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The ESP Model for Learning: An Assessment Process to Deliver Supervisor Training

by J. A. Bardouille, Ph.D. and Leslie H. Smith, Ph.D.

The Plant Academy, established in 1997, is the center for organization learning in the Plant Operations Division at the University of Michigan. The goals of the Plant Academy are to:

- Develop educational training programs and activities to enhance skills, knowledge, and attributes of division supervisors and managers;
- Assess, measure, and evaluate the impact of training on supervisor performance; and
- Link training to individual and team performance goals and the business objectives of Plant Operations departments and work units.

In carrying out the charge to provide a comprehensive training program for Plant Operations managers and supervisors in 1998-99, Plant Academy Dean J.A. Bardouille (JB) and her associate Leslie H. Smith developed the *ESP Model for Learning*. ESP stands for Education, Skills, and Performance.

The ESP Model

The ESP Model for Learning is based on the concept that training must tie to the performance goals of the work unit,

Dr. Bardouille is manager and dean of the Plant Academy, a program within the Plant Operations Division of the University of Michigan, Ann Arbor, Michigan. Dr. Smith is an associate within the Plant Academy. Dr. Bardouille can be reached at jannette@umich.edu.

and that the design and execution of training programs should be addressed at three levels of learning for maximum application to and impact on department objectives. See Figure 1 for the course curriculum. The Supervisor Leadership Programs encompasses these three levels:

E Education:

Education programs provide fundamental learning experiences to meet the challenges of a continuously changing work environment. In this component of the training programs the goal is to:

- Assess learning and skills development needs
- Learn new concepts and best practices
- Develop leadership at all levels
- Develop communities of practice
- Generate responses to new workplace challenges

S Skills:

The Plant Academy's Super Skills Lab meets individual and team skills and competency development needs of managers and supervisors. This targeted, just-in-time program is driven by needs assessment consultations and is designed for mastery of learning objectives.

P Performance:

In this component, the goal is to apply learning to job duties and tasks and to evaluate the impact of training on business objectives.

The Approach to Assessment in the Supervisor Leadership Programs

The most critical step of the ESP Model is the Supervisor Competency Assessment Process. This takes place in the education component of the model immediately after directors, managers, foremen, and supervisors have had opportunity to engage in dialogue on the challenges and response to challenges of the Changing Role of the Supervisor in Plant Operations.

The Supervisor Competency Assessment Process is a "grassroots" approach to assessment; it follows a horizontal path across the ESP Model (education, skills, performance),

which in turn is supported by AME (assessment, measurement, evaluation); see Figure 2. In this process each supervisor rates competency areas in which he or she needs improvement and through one-on-one or small group consultations does job task analysis, problem analysis, and skills development needs analysis.

There are five major steps in the Supervisor Competency Assessment:

1. *Plant Department Managers Competency Development Work Session.* Some 40 department managers identified 42 competencies critical for high performance in Plant Operations and rated them for importance, time spent,

Figure 1 SUPERVISOR LEADERSHIP PROGRAMS 1999 Curriculum

Prerequisites:

1. *The Seven Habits of Highly Effective People*
2. Reinventing Appraisals (performance planning)

Education Programs (60 hours)

1. The Changing Role of the Supervisor in Plant Operations
2. Supervisor Competency Assessment Consultations
3. The Employee Selection Process
4. University Financial Systems: PeopleSoft and FM Systems
5. Sexual Harassment Awareness Training
6. Customer Service for Plant Managers and Supervisors
7. Marketing
8. Law and Policy
9. Coaching for Empowerment and High Performance
10. Workplace Diversity
11. Problem Solving/Decision Making

Super Skills Lab (Minimum 10 hours)

The skills development component of the program is open to all Plant employees.

Practicum Project (Minimum 20 hours)

The Practicum project provides opportunity to apply learning to Department problems and issues.

Figure 3 ESP

Model for Program Design/Example Coaching for Empowerment & High Performance

E= Education (preparation)

Intro: Coaching for Empowerment
Identify coaching Situations in workplace
Learn concepts, characteristics, steps
Do skills needs assessment

S= Skills (mastery)

Counseling and advising
Listening skills
Observation skills
Interviewing skills
Empathy
Analytical skills

P= Performance (application)

Analyzes tasks and situations
Solves employee problems
Listens with empathy
Promotes learning
Builds consensus
Helps set priorities
Takes time to praise
Empowers to get work done
Helps identify boundaries

Assessment → Measurement → Evaluation

Figure 2 The ESP Model for Learning

E= Education (preparation)

S= Skills (mastery)

P= Performance (application)

Assessment → Measurement → Evaluation

and improvement needed. The managers also identified work processes and customer service issues where critical improvements were needed in their respective departments.

2. *The SCAT* (Supervisor Competency Assessment Tool). The results of the managers' work session were analyzed and a tool was developed with the 42 competencies to be used with supervisors in the assessment process.
3. *Learning Needs Analysis*. In one-on-one or small group consultation sessions supervisors:
 - Identify and rate the competency areas in which they need to improve their performance
 - Do job task analysis
 - Identify barriers to performance in workplace situations
 - Determine who is responsible for removing barriers (management, supervisors, or "no control")
 - Identify skills gap and skills development needs
 - Identify resources
4. *Practicum Selection*. Supervisors select a project from the list of issues generated by managers in Step 1 to satisfy requirements for participation in the Supervisor Leadership Programs.
5. *Learning Agreements*. The results of the assessment is compiled in a document called the Supervisor Learning Agreement. This document is reviewed with the supervisor's reporting manager and signed by both parties. The agreement specifies the learning objectives of the supervisor's training program and identifies a timeline for completion of the Supervisor Leadership Programs.

Results of the Assessment Process: What We are Learning

The Supervisor Leadership Programs were formally launched in January 1999 (see Figure 1.). As of this writing, approximately half of the Plant Operations managers and supervisors have registered for and attended at least two education programs. Fifty-five managers and supervisors have completed their individual assessments consultations, and 20 have formed teams to begin work on their practicum projects. The Super Skills Lab began offering targeted skills development training in April 1999.

Supervisor reaction to the assessment process is highly positive. Supervisors report that the process enables them to identify specific areas of skills development that will be directly applicable to their job tasks. Supervisors report that they have never had training done that way and feel that this process will put them in control of their learning programs and exposes them to "training that has meaning." As a result of this assessment process, managers and supervisors are volunteering to participate as instructors and mentors in the Plant Academy Super Skills Lab and education programs. 🏠

Plant Operations Supervisor Competencies

Average Ratings Across Division

N= 42

Data collected August-September 1998

Rank	Competency Area	Importance Rating
1	Customer service	4.62
2	Listening	4.57
3	Leadership	4.50
3	Decision Making	4.50
4	Time Management	4.48
5	Organizational Communication	4.43
6	Coaching	4.36
7	Relationship Building	4.33
8	Managing Conflict	4.31
9	Motivation/Rewards/Recognition	4.21
10	Delegating	4.17
11	Feedback	4.14
12	Group Process	4.07
13	Administrative Duties	4.05
14	Staffing and Interviewing	4.02
14	Managing Change	4.02
15	Planning	4.00
16	Goal Setting	3.98
17	Project Management	3.95
17	Problem Solving	3.95
18	Strategic Planning/Visioning	3.86
19	Written Communications	3.83
20	Managing Diversity	3.79
21	Negotiating	3.74
22	Mentoring	3.67
23	Business Understanding	3.62
24	Performance Management	3.60
25	Staff Development/Career Planning	3.57
25	Policies and Procedures	3.57
26	Financial Management	3.55
27	Situation Analysis	3.43
28	Facilitating Meetings	3.38
29	Verbal Presentations	3.31
29	Organization Behavior Understanding	3.31
30	Influencing	3.14
31	Higher Education Industry Understanding	2.86
	NA Computer Software Application	
	NA Knowledge in Technical Skills Areas	
	NA Union Contract Administration	
	NA Leading Teams NA Managing Work Process	

Note: This data ranks the importance level of 37 supervisor competency areas as rated by 42 Plant Operations senior level department managers, Plant Operations Division, University of Michigan.

NA = no ranking or rating available

All ratings are on a 1-5 scale with 1= lowest, 5= highest

Plant Operations Departments Represented: Building Services, The Plant Director's Office, Grounds & Waste Management, Plant Administration, Parking & Transportation, Utilities & Maintenance Service

Number of managers/supervisors in Plant Operations = approx. 140

Number of employees in Plant Operations, approx. 1150



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New Trends in Student Housing

By David Koch, David Wesse, and Robert Stickney

Every year hundreds of thousands of prospective college freshmen and their parents visit college campuses around the United States. Often one of the first buildings they enter is a student residence hall — the prospective student's possible home for at least their first year in school. These first impressions are very important to the students, their parents (who may be paying the bills), and the university.

What factors are most important to students and parents in selecting a college or university? According to Terry Sichta, Georgia Institute of Technology's special assistant to the Associate Vice President for Auxiliary Services, "Academic programs and location are the major factors used to develop a 'short list' of schools for students to visit. During visitations, the deciding factors become ambiance, assistance programs, and the quality, type and style of student housing."

Secure and well-maintained housing facilities that provide students with privacy combined with creative residence life programs, support the admissions/recruiting process and greatly assist the university in attracting highly qualified students. Residence halls also provide significant auxiliary revenue streams and supplementary funding for other areas of the institution.

David Wesse and Robert Stickney are consultants in KPMG's Higher Education Consulting Practice. David Koch is a former KPMG manager and is currently a principal with Education Environments. Stickney can be reached at rstickney@kpmg.com.

History

The earliest residence halls were developed at Oxford and Cambridge during the 13th century and were built on the model of a total academic environment. Professors served as house masters, common living areas and libraries provided socialization and study space, students slept in private or shared rooms, and meals were taken in a central dining room that was shared by faculty and student alike. Typically, buildings were no more than three to four stories in height, and living and study facilities were provided for every 20 to 30 students.

This model persisted through the first half of this century with some interesting manifestations. Josephine Louise House at Newcomb College in New Orleans featured a central dining space with a balcony for string quartets to serenade the young female students as they took their evening meal; servants quarters in the attic of the building allowed students to bring their maids to campus with them.

During the 1950s and continuing through the 1970s, the various interpretations of the International Style made their way to the college campus. The new model of student housing consisted of high rise dormitories clustered around a central elevator core and rooms laid out in double loaded corridors with as many as thirty to forty students sharing "gang bathroom" facilities. Generally all of the rooms were configured for double occupancy and the furniture within (desk,

bed, closet, and a minimal amount of bookshelf space) was anchored in place. Social lounges served up to 60 students per floor. Study space, since it did not provide revenue, was kept to a minimum. Eating facilities were provided at central dining halls that served thousands of students at scheduled times and were remote from actual living areas.

The establishment of the high-rise model of student housing was a national trend due to low interest financing available from the federal government. The housing shortage that manifested itself in the mid 1940s in U.S. residential markets made an impact on college campuses during the 1950s as the first of the "Baby Boomers" reached college age. On many campuses, the need for new student housing was unprecedented and required the quick construction of dormitories that could accommodate large numbers of students. Since the majority of incoming students had grown up sharing a bedroom with one or more siblings, or had served in the military prior to arriving on campus, the shared room-communal bath model was acceptable.

Students' Housing Needs Have Changed

Older, "dormitory style", residence halls may provide a negative first impression for both students and parents, thus hampering the admissions/recruiting process. Poorly maintained and outmoded facilities can drain university finances. Empty beds represent non-productive assets that occupy valuable space and cost hundreds of thousands of dollars in

upkeep and maintenance every year. Reductions in federal and state funding, increases in deferred maintenance expenses, increasingly stringent building and life safety codes, and the requirements of the Americans with Disability Act further exacerbate the pressures on college administrators. The "dormitory" building boom of the 1950s and 1960s has left many campuses with high density models of student housing that are outmoded and disliked by today's students.

Today's students have a very different background from students 30 and 40 years ago. The majority of today's incoming freshmen grew up in single-child or two-children families and have had their own bedrooms since an early age. They are more consumer oriented, and are very likely "shopping" several colleges and universities. Where a student will live is beginning to have a major impact on the college selection process. Today's students may be required to share a room during their freshman year, but they are unlikely to stay on campus as upperclassmen unless the campus can provide such options as an apartment or private rooms similar to off-campus housing. What used to be considered luxuries—kitchens, private bathrooms, study lounges, and social spaces—are now considered basic necessities. Internet connectivity and cable television systems also have become standard requirements.

Student Housing Trends

How does a college or university react to this situation and meet the increasing demands of its students? New Orleans' Tulane University reacted to growing off-campus-housing competition by providing a variety of new housing models ranging from single and double rooms in suite arrangements with bathrooms to two to five bedroom apartments with full kitchen facilities. Other universities are converting their housing to residential colleges. Students live, eat, study, sleep, and attend a significant portion of their academic courses within the residence hall itself. Communal dining halls, academic classrooms, faculty apartments, technology centers, and small libraries are just some of the amenities provided within the residential college.

The primary purpose is to create a living and learning center that brings together students of similar interests. This model has been particularly effective when utilized in conjunction with a specific curriculum, such as a French House where students are required to speak French, eat French cuisine, and receive daily French television broadcasts. Meanwhile, the private sector has recognized student demand for housing as an opportunity. Mid-size developers such as

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Capstone, JPI, Century, and Allen & O'Hara have been successfully building and managing student apartments off-campus for more than a decade. Within the last few years student housing has also caught the attention of major developers such as Trammell Crow and LaSalle Partners.

Off-campus amenities provided by these firms include:

- private bedrooms and baths
- multiple layers of security
- storage
- covered parking
- swimming pools and spas
- LAN and direct wiring to the campus computer system
- computer rooms with computer and the latest in peripheral equipment
- optional housekeeping services

New companies and other consultants are working with colleges and universities to integrate learning activities into both on- and off-campus projects. Living/learning programs include providing on premise classrooms, special support for incoming freshmen, mentoring by upper classmen, and inviting student residents and guest faculty to buffet dinners. Facilities and equipment are provided for distance learning sessions and group study sessions, and programs are designed to match students' study habits and enhance learning needs (i.e., providing tutors from 10 p.m. until midnight).

Need for Funding

Meeting the changing demands of the student housing market often requires wholesale renovation and/or new construction, creative management and, most of all, funding. Furthermore, once the model of housing has been developed, built and occupied, it must be maintained which requires adequate capital reserves. Listed below are four options to financing a revitalized student housing program.

Current capital reserves and development programs: Very few schools exist with adequate resources to fund a revitalized housing program. While the use of development campaigns can be useful to provide sources of funding, donors typically are more interested in funding academic and athletic facilities than providing funds for the renovation or construction of student housing.

Debt financing through bond issuance: This is the most commonly used method of financing and provides the

university with the greatest degree of control over the development process. The disadvantage is that the university takes on risks associated with leveraging its assets. The school must budget annual reserves to pay down debt and, although often overlooked, should establish capital reserves for long-term maintenance.

Off balance sheet financing: This involves establishment of a separate 501 (c) 3 corporation that finances and manages the university's housing operation. The new not-for-profit

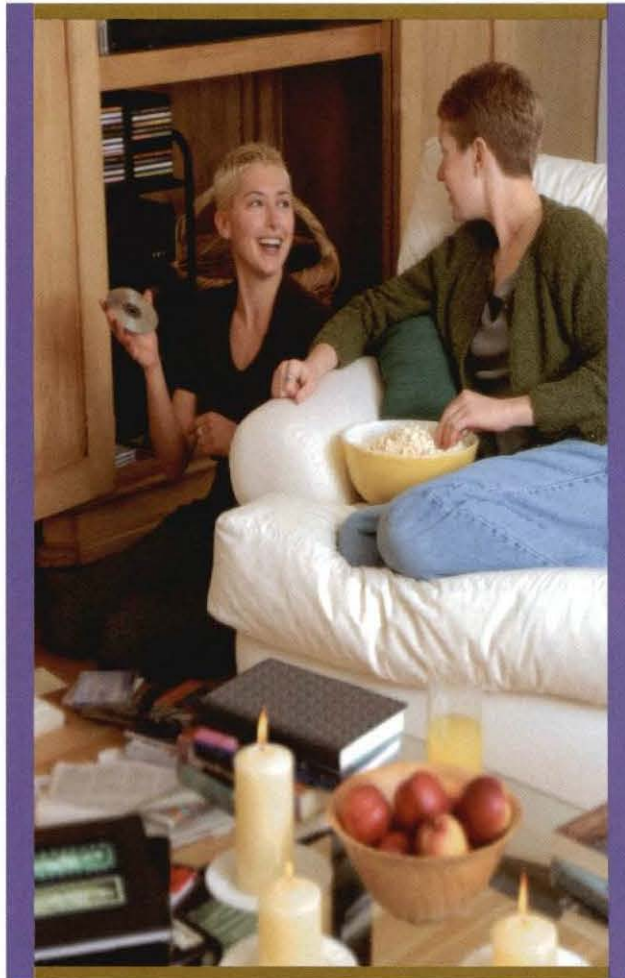
corporation is often established with a board comprised of university board members and administrators, as well as outside individuals. Once the corporation is in place, the university donates the residence halls to the corporation (and leases the land) to provide an asset base for the new not-for-profit organization. The corporation can then issue debt to fund renovation and/or new construction activities. The advantage of this approach is that the financing is under the umbrella of the new entity and is not included on the balance sheet of the university.

Land lease: Under this scenario, the school sells off the capital asset (i.e. the existing residence halls) and leases land to a private developer in exchange for an annual lease payment and/or a percentage of operating profits. The developer renovates the existing residence hall, and/or erects new construction projects. The advantage of this approach is that the developer is responsible for the financing of the projects, and is generally re-

sponsible for the maintenance and the operation of the facilities. The university is able to reduce its administrative costs and preserve precious tax exempt debt dollars for other uses. The disadvantage to this approach is that the university loses some control over its housing system (this can be avoided by a carefully structured contract with the operator), and the developer may require university guaranteed occupancy levels.

Developing the Plan

With unhappy students, outmoded residence halls, and a lack of traditional funding, what are progressive university administrators doing to solve these problems? Many are either forming internal task forces, retaining experienced consultants, or both. Their goal is to develop near term and



long-term housing strategies and plans. The first planning step is to determine market trends and the university's position within its market through a market study. The study should consist of four main parts:

- A facilities audit to determine the existing maintenance condition of the housing facilities
- A financial and management audit of the university's housing operations and residential programs
- A market study of the current and future student population, the local rental housing market, and a study of peer institutions (competitor's) housing and residence life facilities and programs
- A study of enrollment and occupancy trends for the university

Once these four basic components have been assessed and evaluated, a plan can be designed that will:

- Clearly state the university's current housing operations and residence life programs (i.e. the "as is.")
- Present a fully developed model of the university's future residential community (i.e., the "can be"), including:
 - unit types and mix
 - projected bed counts
 - management and operational organization

- Outline proforma operating statements comparing in-house operations (with associated costs for construction, debt coverage, and capital reserves) versus likely revenue streams from alternative approaches (i.e., outsourcing to a 501 (c) 3 foundation, privatization, etc.)

Recommend overall "best" approaches for the university

The proformas serve as a "guide" in the decision-making process. If the university decides to move forward on a traditional basis, the proformas serve as the financial guidebook to proceed with financing, construction, and operating costs. If the decision is to pursue a non-traditional approach, the proformas offer a means of evaluating outside proposals.

Conclusion

Universities such as Georgia Tech, the University of South Florida, the University of California at Davis, George Mason University and many more have developed innovative and creative housing plans. They have recognized that student needs and demands have changed and are continuing to change. They are committed to changing with them. Other universities which do not have a plan may face a future of increasing vacancies in student housing as progressive universities and private sector developers provide the housing that today's students and their parents are demanding. 🏠



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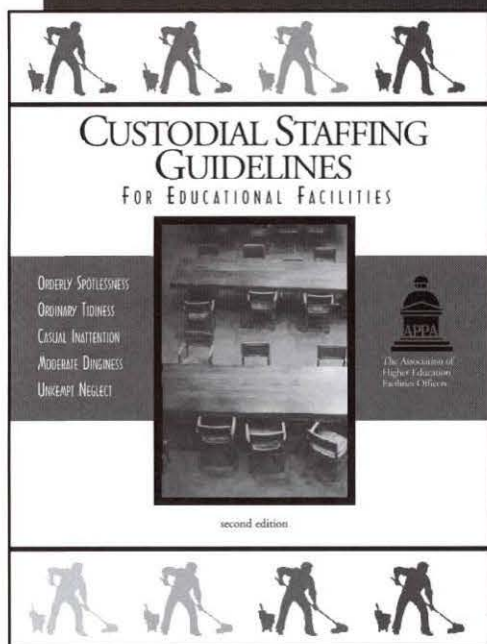
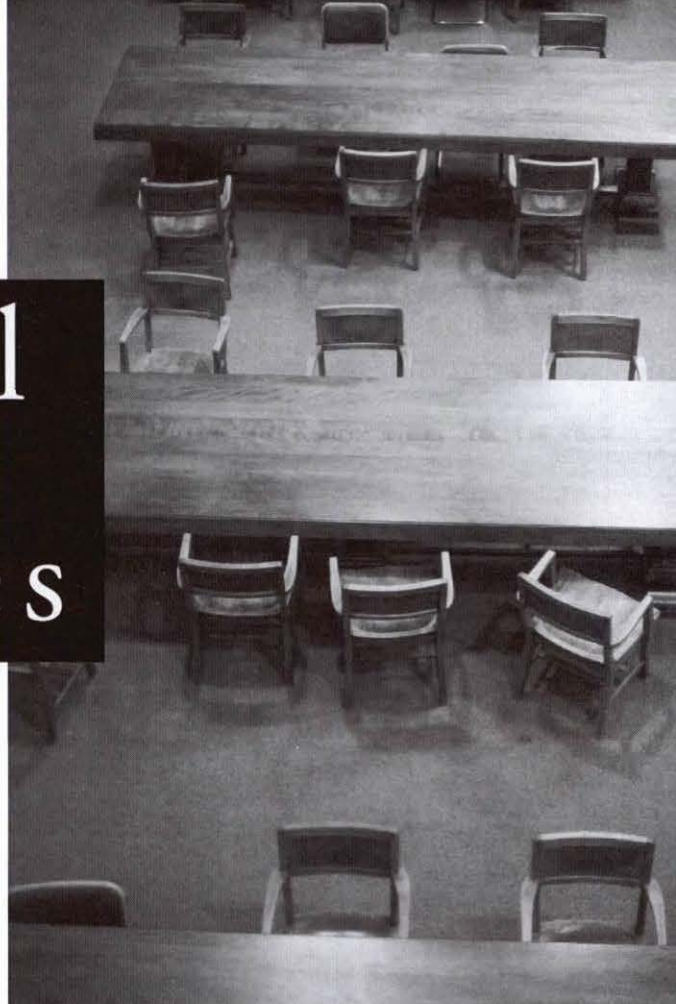
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APPA Partner Offers Construction Tracking Services

by Fonda Rosenfeldt

“Partnering” and “strategic alliances” are buzzwords that dominate today’s business world. What do those phrases mean when they describe APPA’s strategic alliance with the CMD Group?

APPA and CMD Group formally announced their strategic alliance at the 1998 educational conference in San Jose, California. Though this alliance, CMD Group is committed to giving—at no or little cost—APPA members tools to make their jobs easier. In fact, CMD Group’s products, services, and programs build on two of APPA’s key focus areas: Planning, Design, & Construction and Maintenance & Operations.

CMD Group’s products and services assist in tracking construction projects, estimating project costs, selecting architects and design professionals, identifying building products, and selecting bid dates for upcoming projects. Together, these tools improve the flow and quality of information being reported to the industry.

Tracking Construction Projects

CMD Express is an Internet-based, project-tracking tool for construction and facilities professionals located online at: www.cmdexpress.com. Once users register in CMD Express, they have the ability to create their own database of projects and project contacts.

Fonda Rosenfeldt is a regional editor at Construction Market Data and the team leader on the CMD Express initiative. She can be reached at fonda.rosenfeldt@cmdg.com.

When a user logs on to CMD Express, he or she is provided with a template to input their project data. The template guides them through fields to capture and input key project data into a project record. The project record consists of pertinent information including: project title, location, size, roles (owner, architect, consultants), important project details (including structural, mechanical, electrical details), and status (whether the project is proposed, in working drawings, in the bid stage, etc).

Once project and company records are created, the user has the ability to update and track project information in their database. Facility managers can go to one place and check or update the status of all their projects, as well as keep a comprehensive database of contacts for projects.

Data entered by APPA members feeds into Construction Market Data’s project database. This comprehensive database details and promotes commercial construction projects in the planning or bidding stages. Commercial building product manufacturers, contractors, subcontractors, and other members of the construction industry subscribe to the database so that they can discover, bid on, and track construction activity.

Construction Market Data will roll out CMD Express to a selected group of APPA members for testing and will make CMD Express available to all APPA members in the future.

“We are really looking forward to directing our members to CMD Express,” says E. Lander Medlin, APPA’s executive vice president. “There is a growing need for this type of construction management tool, and we need APPA members

to contribute to the database to make it even more valuable."

In addition to CMD Express, CMD Group brings even more tools to APPA members to assist in project development and management.

Bid Date Selection and More

Construction Market Data offers assistance to APPA members when selecting bid dates. Once an APPA member is ready to set a bid date on a project, they can contact their local CMD reporter, give the reporter information on when they would like to bid the project, and receive feedback on which bid dates are best. CMD reporters are able to advise owners and facility managers with this information by looking into the Construction Market Data project database and reviewing the number of projects in their area that are bidding on or around a certain date.

By having this type of reconnaissance in setting bid dates, and by choosing dates that do not already have an abundance of projects bidding, a facility manager or owner can improve the likelihood that they will receive more careful and accurate estimates. Ultimately, this service helps to improve the price on a construction project and avoid unnecessary and costly project rebids.

Construction Market Data offers many other services to APPA members including assistance in listing RFPs and the free advertising of bid notices. Construction Market Data also operates plan rooms in the major construction

markets, where facility managers can place plans and specifications on bidding projects, allowing contractors to view their projects.

Cost Estimation

Construction Market Data offers several ways to get project estimates. For all APPA members who register and track projects through CMD Express, Construction Market Data will provide free project comparables. Project comparables are listings of actual construction projects that have gone through the bidding process. For example, if you are planning to build a new dormitory and you enter the report in CMD Express, Construction Market Data will automatically e-mail you reports on recent dormitory project that have bid in the last 18 months and contain the three low bidders and their bid amounts. These project comparables help CMD Express users benchmark costs and bids with actual projects and to identify low bidders.

CMD Group is the parent company of R.S. Means, the leading publisher of cost information and other reference titles. Known best for its annual cost guides, R.S. Means helps facility managers and other construction professionals prepare estimates with the *Means CostWorks* CD-ROM. *Means CostWorks* allows users to select line items and create cost lists, search electronically for key words, export data to spreadsheet applications, and more.

Finally, CMD Group companies in conjunction with Cahn-

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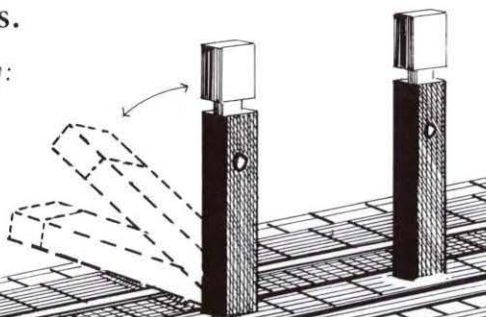
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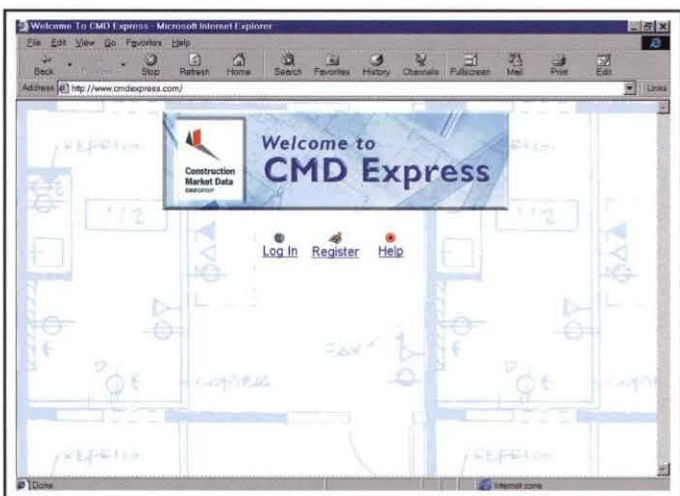
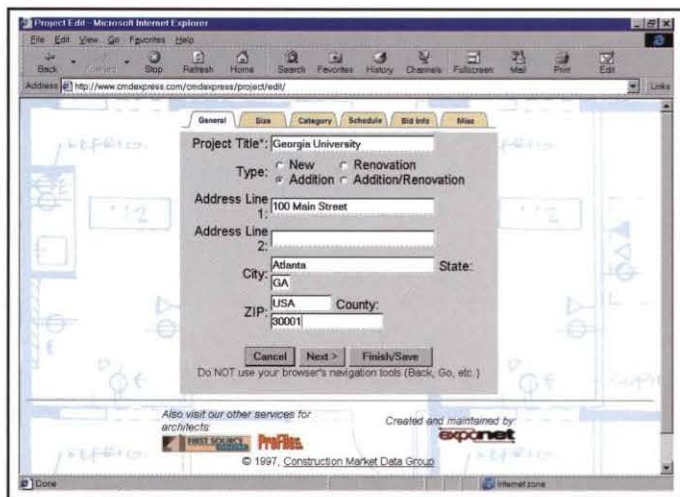
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Conclusion

CMD Group's philosophy is, and always has been, to become an integral part of the industry by giving back to industry professionals through our products, services, and our strategic partnerships with both profit and nonprofit organizations. This philosophy is key when looking at why CMD Group grew from a local construction reporting service started in 1982 to being the world's leading provider of construction information in 1999. The reason for our growth: CMD Group identifies needs of industry professionals and finds unique ways of fulfilling those needs. 🏠

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CMD Group is a leading worldwide provider of proprietary construction information and includes companies such as Architects' First Source, Construction Market Data, and R.S. Means.

Architects' First Source publishes *First Source for Products*, a comprehensive, preliminary product information source available in print and on the Internet. Through alliances with the Construction Specifications Institute (CSI, another strategic alliance partner with APPA) and Thomas Register, Architects' First Source also produces CSI's SPEC-DATA® and MANU-SPEC® as well as CADBlocks™, which deliver manufacturers' technical product data, proprietary specifications, and dimensionally accurate drawings. Together, these products offer commercial building product information for each member of the building team at each stage of the construction process. To request a copy of *First Source*, call 800-395-1988 and mention that you are a member of APPA.

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To find out more about CMD Group, attend the CMD Group presentation, Information Tools for Today's Facilities Manager, at APPA's 1999 Educational Conference in Cincinnati, Sunday June 20, at 10:00 a.m., stop by our booth in the exhibit area (#534), visit the CMD Group website at www.cmdg.com, or call 800-992-7575 for more information.



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The Campus Environment and Learning

by H. Val Peterson

Almost every educator will agree that a well-maintained teaching facility is essential for a proper learning environment. Yet no one has been able to prove that the quality of the facility directly affects the learning of the students within that environment.

As colleges and universities struggle with shortfalls of funds to invest in constructions and renovations, and even to provide adequate funds to maintain existing facilities, it is important that facilities managers emphasize the relationship that educators intuitively seem to understand which is that the condition of the facilities is an important element in the overall learning process. Many of us may recall the study conducted in the mid-1980s by the Carnegie Foundation for the Advancement of Teaching¹ wherein the condition of the buildings and grounds was identified as a major factor influencing the students choice of a particular institution to attend. Nothing in that study, however, tied the environment to successful learning.

A more recent article published in the December 1998 *Business Officer* magazine² noted that "a campus's physical presence typically serves as the 'front door' for key audiences and important constituencies, creating an initial—and often enduring—image within the

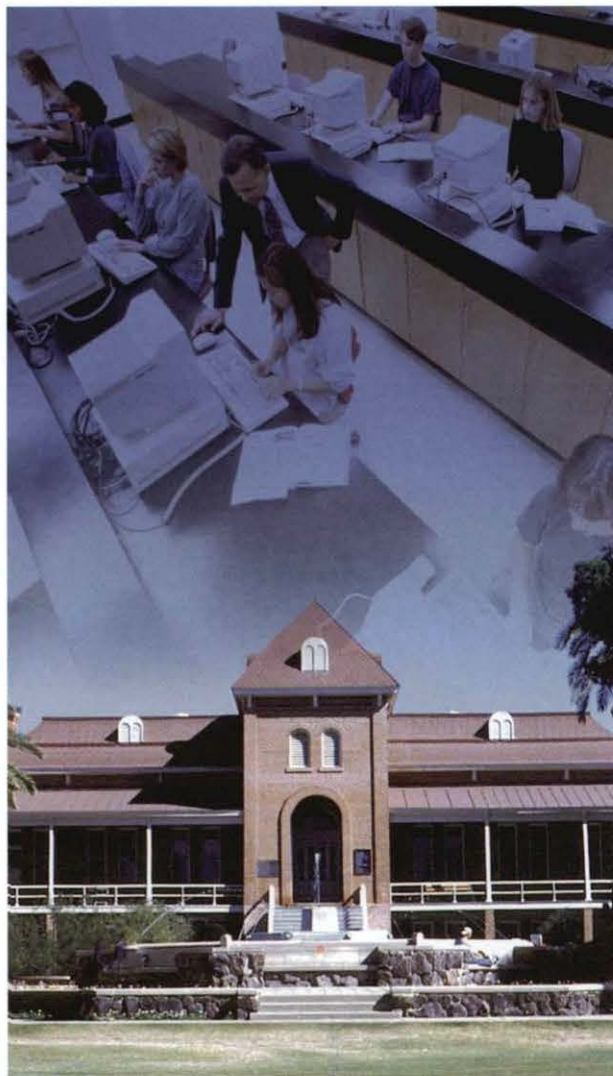
community from which it hopes to attract students, faculty, and staff." As competition intensifies for the best and brightest students, faculty, and staff, the physical amenities fig-

when a campus visit to another school convinced her that the campus amenities offered by each school were considerably different and were found to be much better at the institution she ultimately chose to attend.

For those of us who have attended schools in the past or attended meetings, workshops, and seminars where the built environment and its maintenance were both lacking can probably recall examples of distractions created by noisy pipes, uncomfortable temperatures, peeling paint, objectionable odors, broken window blinds, flickering lights, and a host of other annoying conditions. When any of the human senses of sight, hearing, smell, taste, or touch are disturbed by unusual or distracting stimuli, mental concentration is interrupted and the mind tends to focus on the distractions rather than what is being said or presented. These distractions can be as disturbing to the teacher as they are to the student.

Not only can the condition of the facility be distracting but it can also create an "I don't care" attitude as well. In an "I don't care" atmosphere, the environment deteriorates at an even greater rate.

While there is no absolute proof linking the condition of the built environment and the successful learning of students within that environment, there have been attempts made to make that connection. The difficulty seems to lie in being able to isolate the variables that influence student behavior. The process presents some major problems of



ure more prominently in the decision-making process. Prospective students and their parents compare dormitories. Professors in high demand look closely at libraries and research facilities. A recent *Wall Street Journal* carried an article about an ivy-league sophomore who originally intended to enroll at one university but changed her mind

Val Peterson is director of facilities management at Arizona State University, Tempe, Arizona, and a past APPA President. He can be reached at valpeterson@asu.edu.

methodology and makes any research effort in this area somewhat tenuous. The results of some studies in elementary and secondary schools that evaluated the possible relationships between selected student variables and the condition of the school building which the student attended was reported in the January 1997 issue of *School Planning & Management* magazine³. The studies found a positive relationship between building condition and student

academic performance. In all the studies, student achievement test scores were higher in the better buildings. The greatest increases were found more often in cosmetic factors such as paint, cleanliness, furniture, graffiti control, and grounds.

Several specific building conditions had a positive effect on performance. For example, student test scores were higher in buildings that had windows in the classroom, less graffiti, better locker conditions

and acoustical ceilings. In one study higher scores occurred in buildings with air conditioning and recently painted exterior walls.

Based on the research in this area, there was no doubt that building condition affects academic performance. The only remaining issue is whether the educational benefit outweighs the financial cost. A new building may not be necessary, but attention to air conditioning, furniture repair, building maintenance, graffiti removal, and general cleanliness are all important aspects of the learning process. Even though the aforementioned studies were not conducted at colleges and universities, the same results might be anticipated at institutions of higher education.

If faculty managers are to succeed in enhancing the learning environment at their institutions they must use every means possible to convince decision-makers that the condition of the facilities has a direct relationship to the success of student learning. In times when maintenance funds are being diverted from facilities management budgets to support other programs, the case needs to be made in behalf of the students that the condition of the facilities is an important consideration for successful student achievement. The point needs to be driven home that recent research supports the case that academic performance suffers when building condition is neglected. Let the lobbying begin!

1. "How Do Students Choose A College?" in *Change*, January/February 1986.
2. Herman E. Bulls and Jeffrey S. Greenberger. "The Front Door," in *Business Officer*, December 1998.
3. Cash, Earthman, and Hines. "Environment Tied to Successful Learning," in *School Planning & Management*, January 1997. 🏢

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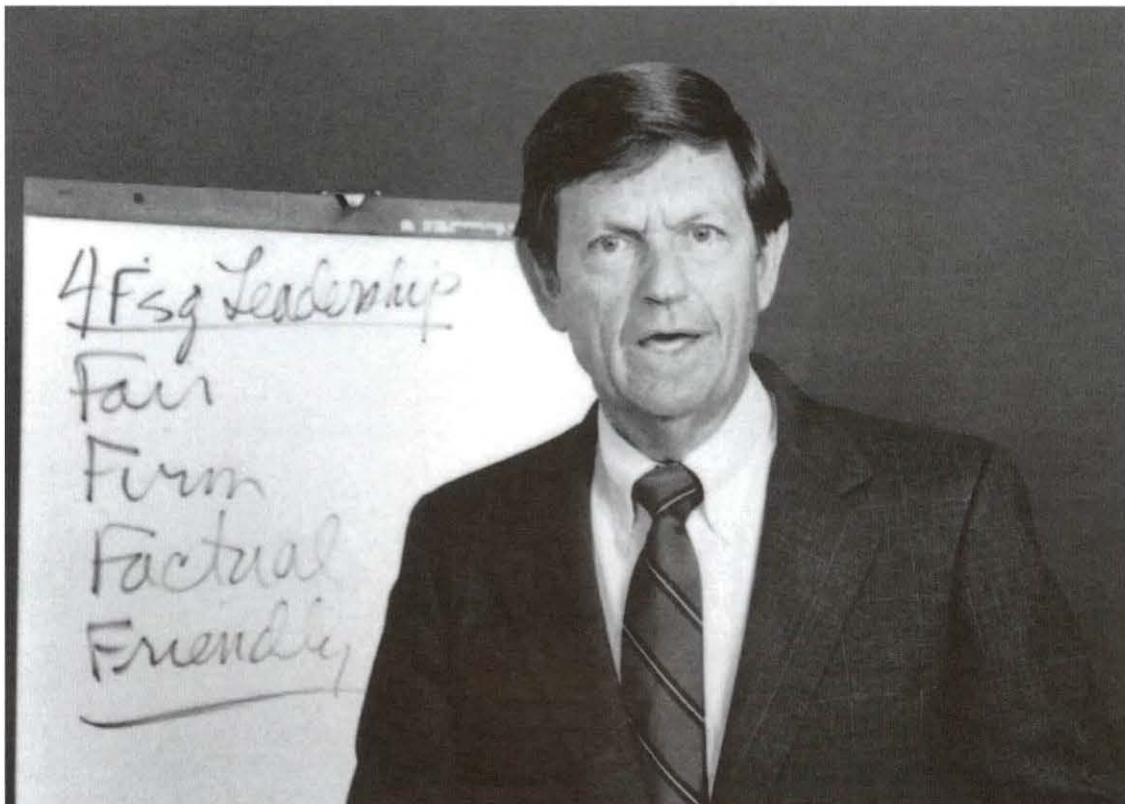
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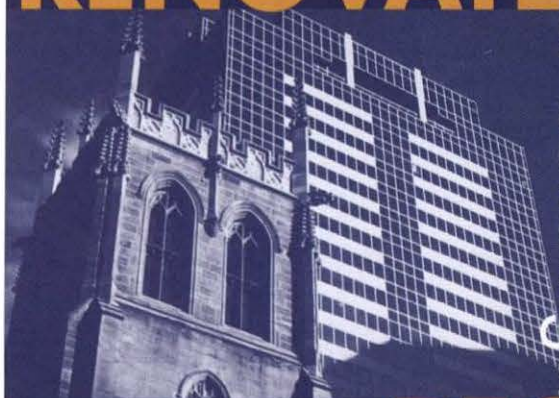
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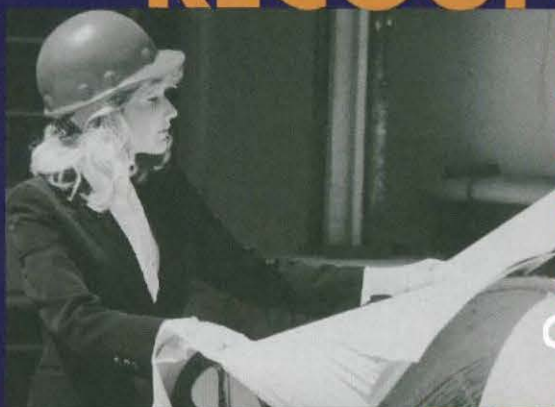
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EXHIBITING AT THE '99 CONFERENCE IN CINCINNATI.

Enterprise versus Client Server CMMS (and why you might care)

by Howard Millman

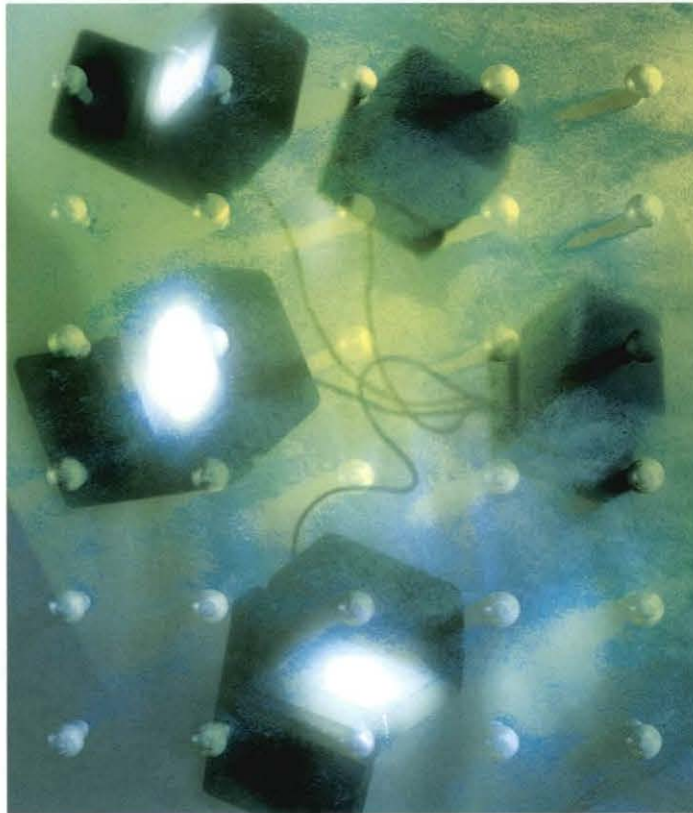
One of my clients recently confided to me that he knows how the dinosaurs felt when they face extinction. "My brain is shrinking and my body is expanding," he says.

This from a man who is rarely intimidated by any of life's challenges. The stimulus for the remark stemmed from a pending upgrade to the maintenance department's aging CMM system. He lamented that he could no longer just focus on his job as director of the physical plant. Instead, he finds himself increasingly absorbed in trying to use the tools that his staff uses to do the job. Sound familiar?

"When I first started with computers we had (Maintenance Automation's) The Chief, a simple DOS-based system that tracked work orders, inventory, and did some budgeting," he said. "With the new system, we want to view CAD drawing, track assets, manage spaces, generate custom reports for the vice president, and eventually link to the financial office's Oracle-based accounting system."

Howard Millman operates the Data System Services, LLC, a vendor-independent consultancy that helps universities and university hospitals select the best products and practices to automate their facility management processes and transform data into knowledge. Reach him at hmillman@ibm.net.

He received bids from four vendors; each offered two or more products. The software ranged from \$390 to \$1,550 per user. Much of the price gap lie in the difference



between "workgroup," "client-server," or "enterprise." After spending a couple of days wading through product literature, testimonials, and conversations with the vendors, he had to stop his research and return to running the physical plant.

Small Differences

So what's the difference between workgroup, client-server, and enterprise CMM systems? Functionally, not much. Any software that runs on PCs attached to a network is client-server. The difference between the three classifications lies in performance, and how much care

and feeding it needs as well as its features. These three characteristics increase dramatically as you move up from workgroup-based CMMS systems up through enterprise-class systems. Likewise, the hardware requirements increase proportionally.

Well, if everything's more expensive and complex, why bother? Two words—performance and capacity. While workgroup and many client-server based systems rely on relatively lightweight back-end databases, such as Access or Omnis, the heavy duty systems use Oracle or Microsoft's SQL server. The back-end database is where all the data processing and storage goes on. The other component of a CMM system is a "GUI" or a Graphic User Interface. That's the part of the program the users interact with as they put in and search for data. The GUI has a comparatively modest effect on performance, however it substantially determines the system's ease of use.

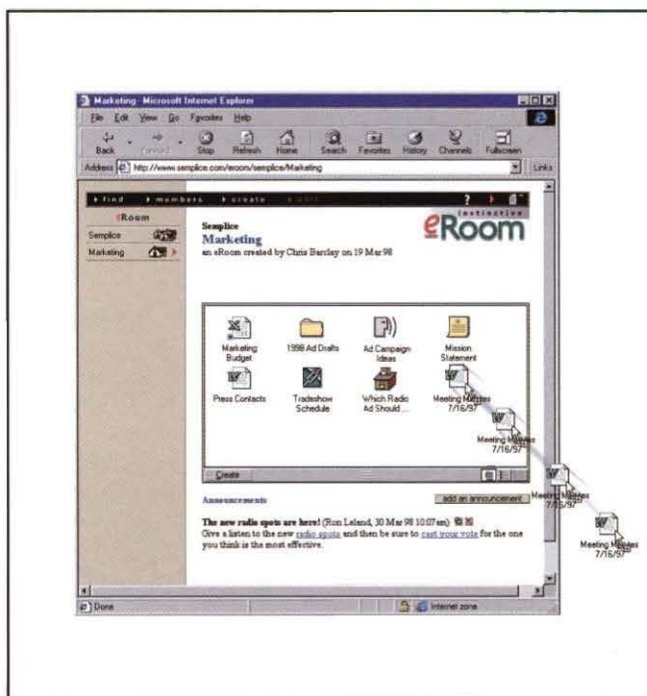
Peak Performance

To you, a robust back-end database translates into an increased capacity to store your data, less waiting time for the system to respond to updates or inquiries, and more reliable links to other enterprise-class systems perhaps in use by the registrar, security, accounting, student life, and others departments. In terms of performance, your staff will get a response from the system in one-half to one-tenth the time.

The down side is, what else, money. The robust systems can cost

up to four times as much per user as the simpler systems. As a one time expenditure, you might live with it. However, ongoing maintenance will cost two to three times as much per year and will require a higher level of expertise, i.e. a consultant, to assist you with upgrades, reconfigurations, and troubleshooting.

What's the break-over point, how do you know if a simpler workgroup or client-server instead of the enterprise system will meet your needs? As a rough guide, schools that generate 5,000 or more annual work orders or have a staff of 30 mechanics plus should consider a higher end system. While you will not need its full capacity in the beginning, you will need the increased reserves after two or three years. It's amazing how



many things you will eventually track and store in the system.

You have another choice and it's one that I often recommend to my

clients. Purchase a lower end system and trade up when—and if—you need to. Yes, it can likely cost more, but not much since you'll spend less on support during the years you own the simpler system. Besides, it typically requires three or more years for most schools to start using anything more than the system's basic features. By that time the older hardware and software will be nearing extinction, instead of you.

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When trying to coordinate the efforts and input of many participants into a project, the one-to-one nature of telephone, e-mail, or faxes can prove too time-consuming. One alternative is Instinctive Technology's eRoom, an Internet-based groupware and workflow alternative especially well-suited for schools with limited IT resources.

eRoom creates a secure, shared workspace on the Web, or an intranet, enabling employees to read and edit documents, search for data, and leave threaded messages for one another. This modern day version of a bulletin board system can help employees keep current and contribute their expertise to help an organization make better decisions, regardless of their schedule and location.

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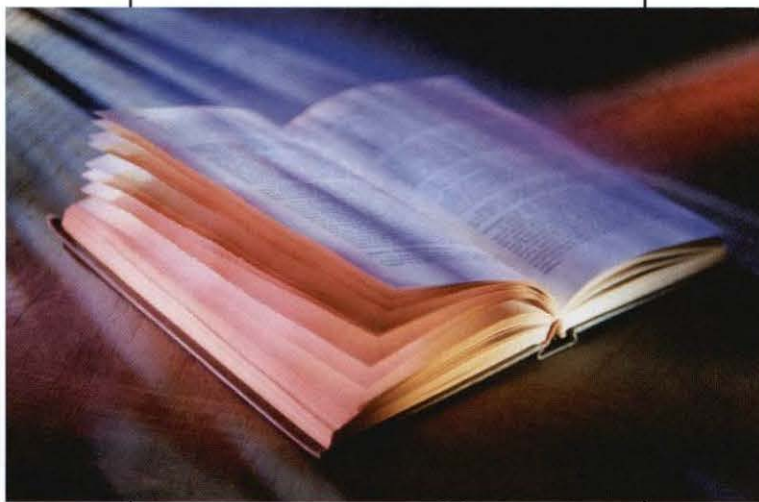
Book Review Editor: Dr. John M. Casey, P.E.

This issue of *Facilities Manager* highlights APPA's 86th Annual Meeting which features the concept of Facilitating Learning in a Changing World. The three books reviewed in this Bookshelf column touch on several aspects of that theme. As professional facilities managers, we all understand that change is our constant companion, or adversary, in our efforts to promote the goals of education, research, and public service. Because of this, trying to keep ahead of the curve on important technical topics, such as indoor air quality and electrical distribution systems, are appropriate for all to read. Vinny Patel, our head design engineer here at the University of Georgia, reviews an excellent new book on the former topic while I revisit the second edition of an equally important work on indoor air quality. I also discuss a book which suggests a program for creating academic excellence by changing (that word again) the culture of a higher education institution. Based on these and other recent works, it is safe to say that even change is changing.

John Casey is manager of the engineering department of the physical plant division at the University of Georgia, Athens, Georgia. If you are interested in reviewing a book for The Bookshelf, contact Casey at jcaseype@uga.cc.uga.edu.

All the reviews that appear in The Bookshelf, of course, are intended to promote and facilitate learning by sharing information with APPA members. In this regard, readers are encouraged to participate in this important effort by volunteering to serve as a member of the exclusive APPA review crew.

* * *



Electrical Distribution Systems, by Dale R. Patrick and Stephen W. Fardo. Lilburn, Georgia: The Fairmont Press, 1999. 473 pp, hardcover.

In the preface, the authors state that this book is intended both for self study and use as a text book in electrical technology programs in technical, 2-year, and 4-year college programs. The authors teach classes dealing with electrical power systems at Eastern Kentucky University so their technical command of the subject matter is excellent. More importantly, they recognized a need for a book which is written from a user's point of view, one that dwells on practical applications rather than pure

engineering design. This book allows the reader with a limited understanding of basic electrical terms to review all aspects of distribution systems, both inside and outside buildings.

The book is divided into thirteen chapters, in which the authors describe fundamentals of generation, transmission, distribution, and utilization of electrical energy by providing pictorial views of associated equip-

ment and devices. By including diagrams, formulas, tables for physical properties of conductors, and sample calculations, the authors have touched enough theory to clarify everyday use of electrical distribution systems and utilization of electrical energy. *Electrical Distribution Systems* contains references to National Electrical Code (NEC) articles to clarify code requirements and compliance for design and installation of distribution

systems. In addition, the authors provided appendices covering important electrical terms and symbols, and a two-page refresher on basic trigonometry for power systems.

Patrick and Fardo have presented a very technical subject in a manner which is reader friendly and easy to access. I recommend this book for facilities management engineers and electrical shop foremen to have in their library.

Vinod Patel, P.E.
Head Design Engineer
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Managing Indoor Air Quality (second edition), by Shirley J. Hansen and H. E. Burroughs. Lilburn, Georgia: Fairmont Press, 1999. 334 pp, hard-cover.

Indoor Air Quality (IAQ) has been on the front burner of the technical stove for over a decade. Everyone in the facilities management profession has his or her own favorite story to relate concerning this ubiquitous problem. Recently, the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) has attempted to develop changes to its Standard 62-1989, which addresses ventilation for acceptable indoor air quality. It appears that the Standard will be changed only incrementally, rather than radically, since proposal changes have sparked heated debate in the profession. As a result, IAQ will continue to command our attention for at least the near future.

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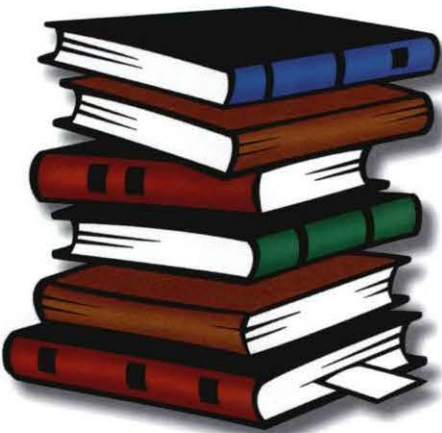
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In addition to ASHRAE information, facilities managers can rely on several excellent books to help keep the IAQ wolf at bay. When I reviewed the literature for a paper on the subject which I co-authored for the *Journal of Environmental Health*, I felt that two books in particular were excellent IAQ resources for facilities practitioners. One of these has been revised recently, and is the subject of this review. I covered the first edition of *Managing Indoor Air Quality* in the Fall 1991 issue of this journal. At that time I gave the book high marks, and I am pleased to report that the second edition is even better than the first. Both Dr. Hansen, the sole author of the original work, and Barney Burroughs, who revised and updated it, are acknowledged Indoor Air Quality experts. When ASHRAE held its conference on IAQ in 1995, Shirley Hansen was the keynote speaker. Similarly, ASHRAE presented Barney Burroughs with the Distinguished Service Award for his work to improve indoor air quality. The two combine their experience to produce an important, practical, and hands-on guide for facilities managers.

In the earlier review, I indicated that the book serves as an excellent reference source for treating existing problems and preventing future IAQ incidents. The revisions in the second edition add current information, and improve the discussions concerning classifying, investigating, controlling

and managing IAQ programs, with special emphasis on operations and maintenance. In addition, a new chapter is included on air filtration, drawing on Burroughs's expertise in this important technology. *Managing Indoor Air Quality* acknowledges the interrelationships between the disciplines of environmental engineering, industrial hygiene, medicine and psychology in defining the problems associated with IAQ. This is a very complicated subject, indeed, and the authors present a concise and practical methodology for facilities managers to follow. The Investigation forms contained in the Appendix are especially well written, and are a highlight of this work.

I repeat my conclusion from the earlier review: this is a gem of a book that deserves a place in every facility manager's library. If you do not have a copy of the first edition, order the second edition at your earliest convenience.

Dr. John M. Casey P.E.

Manager, Engineering Department
University of Georgia
Athens, Georgia

* * *

A Culture for Academic Excellence, by Jann E. Freed, Marie R. Klugman and Jonathan D. Fife. ASHE-ERIC Higher Education Report. Washington, DC: The George Washington University, 1997. 191 pp. softcover.

Many attempts have been made in the past to apply management principles to achieve excellence in higher education. Recent literature in the management field has been awash with discussions concerning corporate culture, total quality management (TQM), continuous quality improvement (CQI), business process redesign (BPR), etc., all aimed at attaining a higher level of quality in an organization. The

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authors of *A Culture for Academic Excellence* show us how these concepts can be used successfully in today's academy, in spite of the fact that institutions are facing problems of increasing costs and decreasing revenue sources. If academic excellence is to be enhanced, surely every component of each institution must take part in this process, including facilities management. This journal has reported on several TQM-based projects aimed at facilities divisions; *Culture* attempts to apply a similar methodology to the entire institution.

The authors promote "quality principles" as the bases for their quality improvement process. They admit that these principles are not new or unique, but suggest that if implemented as a total system they form a new way of thinking about the operation of higher education institutions. Keys to the success of this system approach are the validation of the process from the beginning by the entire administration, the acceptance of change as a positive value in the culture of the institution, and the creation of a culture which utilizes scientific measurement outcomes to help achieve the mission of the institution.

This monograph is another excellent work in the prestigious ASHE-ERIC Higher Education Reports, representing significant review and research work by the authors and the editorial staff. The Association for the Study of Higher Education (ASHE) and the ERIC Clearinghouse on Higher Education of The George Washington University co-sponsor these reports; topics are identified by a national survey, noted scholars and practitioners write the report, and expert advisors and editors review the manuscript before publication. *A Culture for Academic Excellence* represents a major effort to help institutions of higher education weather the storm of being required to do more with less. The process described in the book requires significant effort on the part

of all institutional management and academic personnel to insure success. Much of this effort is spent on modifying the behavior of everyone involved to create a new mindset for evaluating and solving problems. In a large institution, especially one with a significant research component, total implementation would probably require many months of work. Regardless of institution size, it is obvious that such an undertaking should only be done after a careful plan has been developed, and the plan has been accepted at all levels. As the authors indicate, several dozen institutions in the United States already have adopted these "quality principles," so it appears that their process has been successful, at least in the short run.

A Culture for Academic Excellence is a well written book which deserves to be read by higher education administrators. Readers should be aware, however, that the book suggests that it is possible to change the culture of an existing institution; some management literature, especially the seminal work *Corporate Culture* by Deal and Kennedy, suggest that this is possible. However, other books reviewed by me in this journal, including Kuh and Whitt in *The Invisible Tapestry* (another ASHE-ERIC Report) and Hughes and Conner in *Managing Change* suggest that, over time, substantive changes in an institution's culture are not necessarily predictable or controllable. Only time will tell if adherence to the principles of the book will bring positive long-term results.

Dr. John M. Casey P.E.

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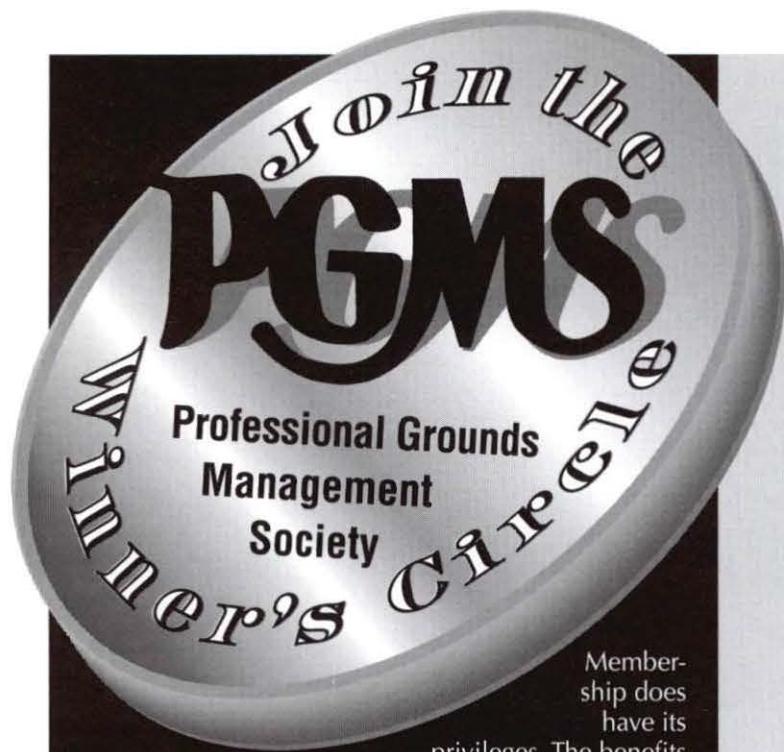


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New Products

Ed. Note: In our last issue we introduced the New Products column for the readers of Facilities Manager. The purpose is to provide a sampling of new products, services, and technologies that will be of interest to the education facilities administrator. These listings are provided by the manufacturers and suppliers and are selected by the editors for variety and innovation. For more information, contact Gerry Van Treeck at 847-562-8614 or gerryvt@concentric.net. Send your new product listings to Gerry at Achieve Communications, 3221 Prestwick Lane, Northbrook, IL 60062.

United Power Corporation introduces Model CPX - the second generation of its popular Model CP family of surge suppression systems. Available in single phase, split phase and three phase voltages including popular delta configurations, Model CPX is UL 1449 Second Edition listed and is rated for use in any IEEE defined category C1/B3 environment, such as main distribution applications. For additional information contact United Power Corporation, 2132 Tomlynn St., Richmond, VA 23230, 804-254-8456

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ing products to the building automation control industry, has designed the new Veris Energy Metering System. An energy metering system that provides a cost-effective solution for aggregate billing and submetering that stores and transmits energy information electronically. For more information contact Veris Industries, Inc., 10831 SW Cascade Blvd., Portland, OR 97223, 800-354-8556

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Correction from January/February Column— CSL Environmental photo was accidentally placed in Sears Industrial release.

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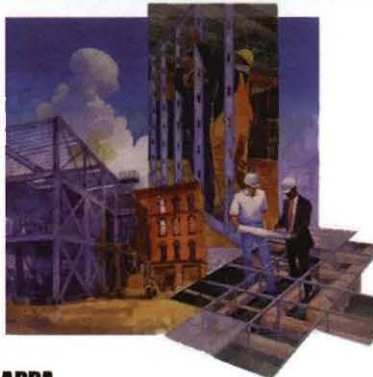
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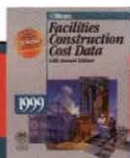
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Jan. 23-27, 2000—Institute for Facilities Management. San Antonio, TX.

July 16-18, 2000—Educational Conference & 87th Annual Meeting. Fort Worth, TX.

July 22-24, 2001—Educational Conference & 88th Annual Meeting. Montreal, Canada.

APPA Regional Meetings

Sept. 26-29—AAPPA Regional Meeting. Wellington New Zealand.

Sept. 26-29—MAPPA Regional Meeting. Notre Dame, IN.

October 3-5—ERAPPA Regional Meeting. Ocean City, MD.

October 3-5—PCAPPA Regional Meeting. Las Vegas, NV.

October 6-10—RMA Regional Meeting. Albuquerque, NM.

October 10-14—CAPPA Regional Meeting. San Antonio, TX.

October 23-26—SRAPPA Regional Meeting. Biloxi, MS.

Other Events

July 11-15—Point of View: ACUHO-I 1999. Vancouver, British Columbia. Contact the Association of College and University Housing Officers, 614-292-0099.

July 12-14—Electrical Systems and Maintenance. University Park, PA. Contact Kenneth Davidson, Penn State University, 814-863-2090.

July 17-18—Life Cycle Costing. Rockville, MD. Contact Amy Tilton or Nicole Ray at FEMP, 509-372-4520.

July 24-28—SCUP34: Enterprising Education for the New Millennium. Atlanta, GA. Contact SCUP, 734-998-7832.

August 9-11—1999 Rebuild America National Forum. Las Vegas, NV. Contact Rebuild America.

August 23-24—Energy '99: An Energy Efficiency Workshop and Exposition. Sponsored by DOE. Orlando, FL. Contact Energy99, 800-395-8574.

August 25-26—Competitive Energy Congress '99. Boston, MA. Contact the Association of Energy Engineers, 770-447-5083.

September 19-23—Groundskeepers Management Academies. Denver, CO. Contact Grounds Maintenance Services, 800-227-9381.

October 12-15—IEHA's 1999 Educational Conference and Convention. Chicago, IL. Contact the International Executive Housekeepers Association, 614-895-7166.

October 29-31—1999 Technical Symposium. Philadelphia, PA. Contact the American Society of Plumbing Engineers, 805-495-7120.

Oct. 31-Nov. 5—National Association of Elevator Contractors 50th Annual Convention. Atlantic City, NJ. Contact NAEC, 800-900-6232.

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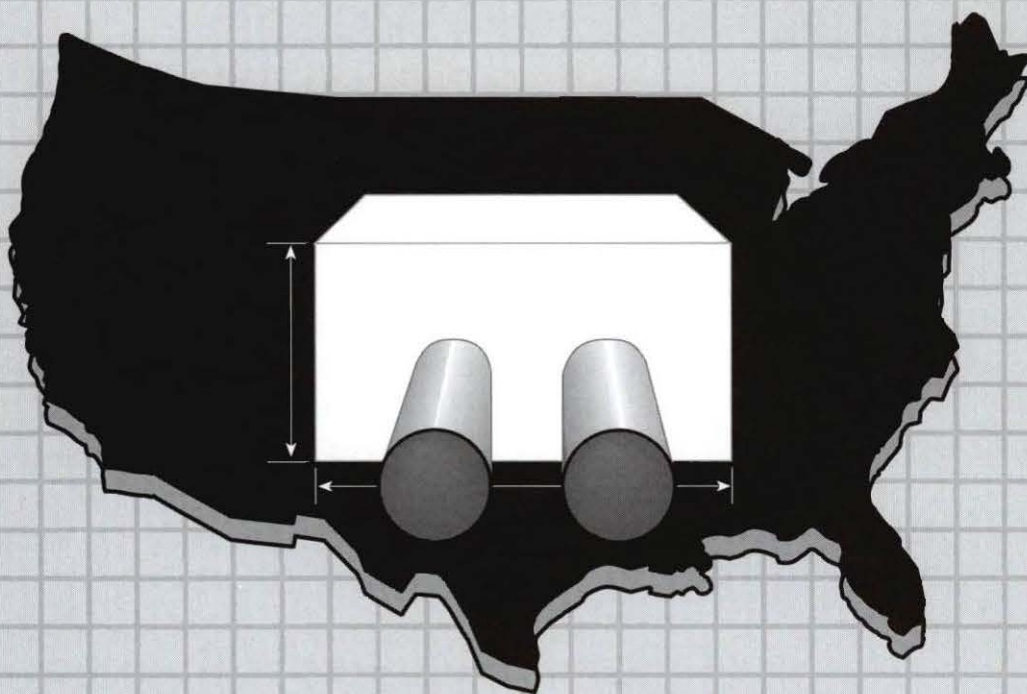
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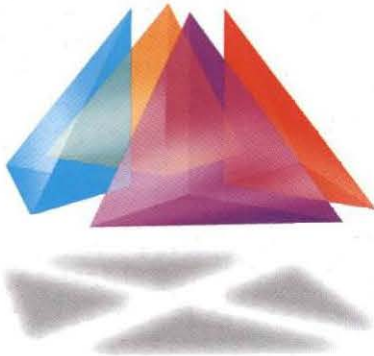
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