<u>Team Evaluation</u>:
Case Studies from Seven Workplace Education Programs

Prepared June 1994
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This study was funded
by the
National Institute for Literacy,
Washington, D.C.

Grant Award #X257A20420

Available from Literacy Partnerships, 14 Griffin Street, East Brunswick, NJ 08816-4806, Tel. 908/254-2237.

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ACKNOWLEDGEMENTS

The authors thank the following:

The National Institute for Literacy, which provided funding for the research which produced this and two companion publications.

ABC CANADA for the funding they provided for our Canadian field-site, and Sue Folinsbee who worked with us in that site and provided valued insights and support throughout.

The Massachusetts Workplace Education Initiative whose early support of team evaluation made this work possible, and whose continued support provided us with materials, access to programs, and insight into the strengths and challenges of the team evaluation process. (We especially thank Johan Uvin, former MWEI Coordinator and current Supervisor of Development in the state Division of Adult and Community Learning. His parallel work in team evaluation enriched this project considerably. Thanks also to Kathe Kirkman, the former Evaluation Specialist in the Division of Adult and Community Learning.)

Donald Cichon, Alice Oberfield Andrews, and Steve Andrews for the technical assistance they provided on instrument design and data analysis.

David Rosen for his steady support and guidance throughout this and earlier phases of our work.

The evaluation teams at Bull Worldwide Information Systems, Datatec Industries, Haartz Corporation, Norton Company, Project REACH at the State University of New York in Albany and Stony Brook, and Victoria General Hospital for their hard work, perseverance, commitment, and generous hospitality.

EXECUTIVE SUMMARY

<u>TEAM EVALUATION</u>:
CASE STUDIES FROM
SEVEN WORKPLACE EDUCATION PROGRAMS

In 1993 and 1994, workplace education resarchers Laura Sperazi and Paul Jurmo field-tested a team-based evaluation methodology in seven workplace education programs. This "team" approach involves key program stakeholders in a process of (1) building an education team; (2) clarifying what information the team would like to generate in an evaluation and designing a strategy and tools for collecting that information; (3) collecting, organizing, analyzing, and reporting findings; and (4) taking necessary follow-up action.

The researchers had developed this "team" or "collaborative" approach two years earlier in evaluations of workplace education programs sponsored by the Massachusetts Workplace Education Initiative and other sources. This team model was conceived as an alternative to more-familiar evaluation scenarios in which (1) program staff carry out informal monitoring of program operations and/or (2) more-formal evaluations are carried out by outside evaluation specialists.

In this project, the researchers wanted to explore the premise that evaluation carried out by a team of internal "stakeholders" could borrow the best from the existing approaches to evaluation while avoiding their limitations. More specifically, a well-planned evaluation conducted by a team of internal stakeholders could produce information meaningful to those stakeholders. It would help them understand what the program might achieve and was achieving, and identify actions which they and others might take to strengthen the program. The researchers felt that this evaluation model also had a natural "fit" with workplaces promoting team decision-making and continuous improvement, an approach to workplace organization which the researchers wanted to support.

This document presents case studies which describe how the evaluation methodology played out in the seven sites, along with lessons which the researchers and team members learned about the evaluation process. These "lessons" are summarized below:

Strengths of the team evaluation model

a. Team evaluation can ties in with team management model. It "fits" with workplaces shifting toward collaborative decision-making and continuous improvement.
b. Team evaluation can get all stakeholders involved so the evaluation and the education program focus on meaningful outcomes.

c. Evaluation standards are developed internally, resulting in reasonable, meaningful focal points for the evaluation and the program.
d. With all stakeholders involved, evaluation can become another collectively-valued "essential program component" for which resources must be allocated.
e. Team evaluation can provide opportunities for staff development -- for all team members but especially for program participants.
f. Team evaluation can produce evaluation procedures which can be replicated by the program itself and by others.
g. Team evaluation can provide an "audience" for stakeholders' ideas.

Challenges of the team evaluation model

a. Team evaluation takes time.
b. Team evaluation requires a mix of special skills.
c. Team evaluation requires particular attitudes and values.
d. Team evaluation requires discipline.
e. If not properly done, the team evaluation process can be skewed to serve the interests of just one or a few stakeholders.
f. If confidentiality is not respected, team evaluation can needlessly jeopardize the security of those involved.
g. Team evaluation requires special knowledge and procedures to minimize bias and ensure validity and reliability.
h. It is difficult to introduce a "team" approach to evaluation in a program or workplace not already "team-oriented."

3. Recommendations for those interested in trying team evaluation

a. Evaluation teams need to have or create:

- Time
- Interest (motivation, "team values")
- Expertise
- A supportive context
- A "code of confidentiality"
- An ethic of continuous improvement

b. To ensure that teams have the above elements in place, those organizing teams should use the following team-building activities:

- Select members carefully.
- Negotiate roles.
- Stress the need for continuity.
- Provide extra training and technical assistance.
- Organize team activities to allow <u>all</u> members to participate actively.
- Set a "climate" of respect.

c. Teams need to customize, refine, streamline the process to fit it to the unique needs and opportunities of each site.
d. Teams should clarify where evaluation fits into the larger program planning process.
e. Teams should consider calling on the expertise of an outsider if necessary.
f. Teams should "get their feet wet" quickly, not waiting too long to start.
g. Teams should understand that their goals for the program will change as they learn more about it.
h. Teams should develop evaluation procedures consonant with the culture of the company and education program.
i. Teams should use resources which are familiar and accessible.
j. Teams should balance "product" (reports, etc.) with "process" (the dialogue created among stakeholders).
k. Teams need to be realistic and fair in what they expect from an education program.
l. Teams should beware of intra-organizational politics.
m. Funders and other "higher-ups" should show interest in the team's activities without interfering in them.
n. Teams should make recommendations which are realistic.

Primary funding for this project was provided by the National Institute for Literacy in Washington, D.C. Additional support for the Canadian field-site was provided by ABC CANADA, a national workplace education service based in Toronto.

INTRODUCTION

Background on this document

This introductory document presents key findings from about the team evaluation process used in seven workplace basic skills programs in 1993 and 1994. Accompanying this document are case studies which chronicle the process of conducting team-based evaluations from the first stages of selecting and preparing a team to the final stages of reporting findings and using results to improve the program.

When we began this project, we had good working ideas about how to implement a team-based evaluation in a workplace basic skills program. We had piloted an early version of the method with six programs which were part of the Massachusetts Workplace Education Initiative in 1990-91. We had been so encouraged by the results that we continued to evolve the method with other programs in 1992.

We saw the use of evaluation teams as a promising alternative to more-familiar evaluation scenarios in which (1) evaluation is done internally by program staff on an ad hoc, informal basis, or (2) control for evaluation is put in the hands of an outside evaluation "expert." We felt that evaluation carried out by a well-organized team of internal "stakeholders" could borrow the best from the existing approaches to evaluation while avoiding their limitations. More specifically, a well-planned evaluation conducted by a team of internal stakeholders could build stakeholder understanding of and ownership for the program. We felt that this evaluation model also had a natural "fit" with workplaces promoting team decision-making and continuous improvement, an approach to workplace organization which we wanted to support.

In late 1992, the National Institute for Literacy provided us with funding to further develop this methodology with seven programs. This gave us a unique opportunity to intensively explore many of the assumptions and procedures imbedded in our earlier model. From late 1992 through early 1994, our early ideas took new shape and meaning as we interacted with the many people who became members of our evaluation teams, and who were themselves struggling to understand what workplace education programs can legitimately be expected to achieve.

At the end of this challenging process of selecting sites, trying out our team evaluation methodology, and analyzing our experience, we produced two documents:

- Team Evaluation: A Guide for Workplace Education Programs, which was prepared for other workplace education teams interested in conducting their own internal evaluations.

• This document, Team Evaluation: Case Studies from Seven Workplace Education Programs, which details the process we went through in our field sites, and analyzes that experience.

This project also produced a third document which drew on sources other than our seven field sites:

Workplace Education: Stakeholders' Expectations, Practitioners' Responses, and the Role Evaluation Might Play. Based on a review of the literature and interviews, this report analyzes the purposes of workplace education programs; approaches to workplace education; the state of the art of evaluating those programs; recent attempts to develop a new, "collaborative" program model; and steps which stakeholders might take to strengthen the field in general and evaluation in particular.

How this document is organized

This case study document is divided into seven smaller documents:

This introductory document which summarizes the methodology used to develop the case studies and key findings about the team evaluation process.

Six case studies which describe how the team evaluation process was used in a total of seven workplace education programs. Each case study includes various appendices, such as sample data-gathering instruments or reports generated by the teams.

Next steps

We feel this project has produced a tremendous amount of new knowledge about the value of -- and procedures for -- involving all stakeholders as active players in workplace basic skills efforts. Many questions remain unanswered -- some old ones and some new ones which emerged from these 1 1/2 years of experience. As we wind up this project, we look forward to working with others who would like to explore these questions further in the pursuit of creating "new and improved" approaches to workplace education.

THE METHODOLOGY USED
TO DEVELOP THE CASE STUDIES

The seven sites

The two researchers originally intended to select six workplace education programs to serve as study sites. These programs would have to have been already well-established and have met the following criteria:

1. Each program would be managed by an existing team composed of a range of stakeholders, including learners, instructors, managers, and union representatives (where a union existed). These teams would have to be interested in conducting their own evaluation and able to devote time to working with the researchers to conduct a pilot evaluation. In lieu of such an existing team, programs would have to be willing to form one for the purposes of the study.

2. The workplaces would be moving toward a "high-performance" organization model characterized by team decision-making and commitment to continuous improvement. Such a workplace would preferably also have an interest in tying its workplace education program into those larger changes in organizational structure.

Laura Sperazi chose three sites from the Massachusetts Workplace Education Initiative. She had previously served as an evaluator for various Initiative sites, and -- with her help -- the Initiative had already begun orienting its programs to a "team" approach to planning and evaluation. Through her contacts with the Initiative network, she identified three programs willing and able to participate as field sites and which met the site-selection criteria.

New Jersey-based Paul Jurmo did not have ready access to the same kind of network of workplace education programs available in Massachusetts. He used his contacts in the field to discuss the feasibility of finding three sites which met the selection criteria. After a time-consuming series of discussions with a dozen programs, he was able to find four which met the criteria. (Note that several programs expressed interest in participating, but were not sufficiently well-established to take on the additional responsibilities of participating in this research project. Also note that, to enable the study to include a site in Canada, additional funding for travel, telephone, and related costs was provided by ABC CANADA, a national technical assistance organization based in Toronto.)

The seven sites represented a mix of industries, populations served, type of instruction, and locations, as profiled below:

	INDUSTRY	POPULATION SERVED	TYPE OF INSTRUCTION
BULL WORLDWIDE INFORMA-TION SYSTEMS (Mass.)	Manufacturer of computer parts	Twenty-eight "associates" of mixed ethnic and language backgrounds	• 3 ESL classes
DATATEC INDUSTRIES (New Jersey)	Manufacturer of computer parts	One dozen Latina immigrant women assembly workers	ESL (in small groups organized by skill level)
HAARTZ CORP. (Mass.)	Manufacturer of vinyl fabrics	Fifty line employees, mostly white men, with a few women.	• 2 math classes • 2 language arts classes • GED class
NORTON COMPANY (Mass.)	Manufacturer of grinding wheels and related abrasive products	One hundred employees, including many older white men who have worked for the company for some time	• 3 math classes • 3 language classes • 2 blueprint reading classes • 1 introduction to measurement class • 1 machine maintenance class
STATE UNIVERSITY OF N.Y. (at Albany, NY)	Educational institution (state university)	Custodial workers on state university campus	10-week basic reading and writing course, using whole language approach.
STATE UNIVERSITY OF N.Y. (at Stony Brook, NY)	Educational institution (state university)	Two dozen custodial and maintenance workers in campus residence halls	• Initial 7-week summer math course. •Subsequent technical communications (reading and writing) course.
VICTORIA GENERAL HOSPITAL (Halifax, Nova Scotia)	Major teaching hospital for Maritime Provinces	Primarily Canadian-born hospital workers from food services, custodial, and other departments	• Basic reading, writing, math (for personal and job-related development) • GED prep.

Researchers' roles

In five of the seven sites, the researchers served as facilitators of a team evaluation process. This process varied somewhat from site to site depending on the particular needs, resources, and schedules at each site. In general, however, the process involved:

(1) forming and preparing the teams,
(2) helping the teams identify what information they needed and how they would collect it,
(3) collecting, organizing, analyzing, and reporting findings, and
(4) taking necessary follow-up actions.

In those five sites, the researchers worked with site coordinators to lead the teams through the various required steps. The researchers also documented the process and the various products (e.g., data-gathering instruments, minutes of team meetings, evaluation reports) which emerged.

In the remaining two sites (at the two State University of New York campuses), Paul Jurmo trained two workplace educators who had previously contracted to help those programs with planning- and evaluation-related needs. In the training, the consultants were introduced to the team evaluation process and figured out how they might apply it in their two sites. Paul Jurmo then maintained regular long-distance communication with the two consultants to (1) provide them with ongoing technical assistance and (2) document the evaluation process as it played out in the two sites.

How the case studies were prepared

The above interactions with the seven teams varied from six to twelve months, depending on the site. Toward the end of those interactions, the researchers compiled drafts of case studies documenting the process and lessons learned for each site. These drafts were submitted to the site teams for feedback to ensure accuracy and confidentiality. The researchers then revised the drafts accordingly and compiled them in this document.

As each case study was compiled, the feedback from team members and the researchers' personal observations were incorporated into the end of each case study. Those analyses by team members and by the researchers were then summarized and further analyzed into the following "Lessons Learned" section. In it, the researchers present what their work with the seven sites has demonstrated about the team evaluation process.

LESSONS LEARNED:
KEY FINDINGS ABOUT TEAM EVALUATION

This section summarizes what the researchers learned about the team evaluation process. These findings draw directly from the project's seven test sites, as well as from prior work done by the researchers in other workplace education evaluations --"team-based" and otherwise.

This summary presents the strengths and challenges of using evaluation teams, along with recommendations for those interested in trying this approach.

1. Strengths

a. Team ealuation can tie in with team management model. The team evaluation process can complement and support the team approach to management now being adopted by many North American workplaces -- and vice versa. Companies interested in developing mechanisms for involving employees in collaborative decision-making might see a collaborative evaluation of their employee education program as an opportunity for showing what workers can do and helping them develop team decision-making skills they can use in other company contexts. Conversely, a workplace education program interested in carrying out a team evaluation will likely have a "head start" if the company within which it is operating already has a history of "teamwork"-- a collaborative ethic, mechanisms, and expertise -- which the education program can build on.

b. Team evaluation can get all stakeholders involved so the evaluation and the education program focus on meaningful outcomes. By involving a more complete range of stakeholders in identifying program goals, the team evaluation process allows (1) the evaluation to focus on those particular goals and thereby clarify for stakeholders whether their expectations are being met and (2) the education program to better know how it might serve stakeholders' needs in the future. Historically, programs and their evaluations have tended to not take into account the expectations of all stakeholders, but to define program goals and evaluation criteria more narrowly. Team evaluations have generated new interest in workplace education programs by (1) providing a system of "checks-and-balances" to ensure that all stakeholders are given a chance to decide what information to focus on in the evaluation, and (2) opening stakeholders up to a broad range of outcomes they might not previously have considered.

c. Evaluation standards are developed internally, resulting in reasonable, meaningful focal points for the evaluation and the program. The team evaluation process allows stakeholders to think critically about what a program can reasonably achieve and therefore be held accountable for. Members can, for example, get away from expecting the program to by itself "improve productivity;" instead, members can define clearer, more specific objectives for the program to focus on. This is in contrast to situations where program standards are set externally -- or even internally -- by sources who are either unfamiliar with the workplace's actual needs or who haven't given much thinking to them. When program objectives are not carefully negotiated, the resulting standards are liable to push the program down paths which **do not** reflect stakeholders' actual needs and interests.

d. With all stakeholders involved, evaluation and education can become collectively-valued "essential components" for which resources must be allocated. Evaluation is too often seen as an imposition or afterthought rather than an essential element of a solid program. A team evaluation process can demonstrate the value of a well-crafted evaluation to all stakeholders. They are thus more likely to invest time and other resources in evalaution in the future.

A solid evaluation can also increase the credibility of the education program itself, by demonstrating what the program is achieving and that a team of stakeholders thinks it is worth investing their time in.

e. Team evaluation can provide opportunities for staff development -- for all team members but especially for program participants. By going through a well-planned team evaluation process, all members can develop particular knowledge, values, and skills useful to the organization and individuals. For example, members can learn how to define and solve a problem, communicate with others within the organization, and develop action strategies. They can also develop self-confidence and stronger relationships and expand their vision of what they and the organization can accomplish. Participation in the team evaluation process might thus be seen as a valuable staff development activity. It can also be a unique life experience for program participants normally not expected to take on such an active leadership role.

f. Team evaluation can produce evaluation procedures which can be replicated by the program itself and by others. The process of collectively designing, using, and fine-tuning evaluation procedures is initially time-consuming. However, the resulting procedures can be considered as "templates" which can be revised and used again by the program without requiring all of the same preparations. Other programs with similar evaluation needs might borrow from those well-crafted procedures, as well, thereby saving them some of the time otherwise devoted to the design stage.

g. Team evaluation can provide an"audience" for stakeholders' ideas. The team serves as an "audience" for the ideas which team members and others might have been carrying around in their heads about the education program and the workplace. Teams can thereby call up -- and build on -- the considerable prior knowledge, positive motivations, and resources which stakeholders bring with them. Such a process can encourage stakeholders to speak up, get involved, think, and make suggestions in ways they normally would not. The team needs to be be ready to really listen and respond to those ideas -- stakeholders' "vision" about what a better program and workplace might look like.

2. Challenges

a. Team evaluation takes time. Rather than rely on a single evaluator (whether an external or internal one) to do most of the work, a team evaluation requires a number of people to commit time to the preparations and other tasks required. The process will almost inevitably have false starts, run into obstacles, and otherwise require patience and perseverance. However, most workplaces are busy places these days, undergoing many changes, and placing many demands on employees. It is hard for most stakeholders to pay attention to the education program at all -- let alone committing time to an evaluation. This is even more true in small or short-term education programs; members are likely to wonder whether going through a time-consuming evaluation process is really worth it if the program is going to last only six months and serve twelve workers. Members lacking time will be reluctant, unwilling, or unable to participate, or -- if they do participate
-- will be resentful, "looking at their watches" the whole time.

b. Team evaluation requires a mix of special skills. The process requires one or more facilitators able to study and understand the process; lead the team through the various steps -- balancing the need to encourage member initiative with the need to get the job done; know when and where to seek help; communicate clearly; and maintain a positive, productive spirit. Other team members must also have similar abilities. These include communicating clearly in written and oral form, critical thinking, making decisions in a group, finding needed information and resources, etc. (While not all members must necessarily possess every skill, those skills must somehow be available to the team if it is to do the work required.) Members lacking such skills can become confused and be unwilling or unable to participate.

c. Team evaluation requires particular attitudes and values. This approach to evaluation requires that team members have an interest in strengthening the education program, the workplace, and workers' roles. Members need to see the evaluation process as a potential way of contributing to such improvements. Members should value the notion of "teamwork" as an asset for both the education program and the larger organization. Intrinsic to teamwork are "respect," "patience," "perseverance," "listening to others," "compromise," and "consensus." Members lacking such positive attitudes will likely not feel comfortable on the team and either drop out, or interfere with or even sabotage the process. And members need to see the education program in a positive light, not as a narrow "quick fix" project for "the illiterates."

d. Team evaluation requires discipline. Conducting an evaluation -- with or without others -- is not easy. When a team is involved, special attention must be paid to making sure that members follow through on the tasks they agree to take responsibility for. Otherwise, tasks do not get completed and the facilitator or another team member has to take over for those not "pulling their weight." To ensure that jobs get done, the facilitator has the duty of keeping everyone "on task."

e. If not properly done, the team evaluation process can be skewed to serve the interests of just one or a few stakeholders. If the team is not careful, the process might become skewed to focus on issues and recommendations of interest to just one or a few stakeholders, rather than the entire group. Some team members not accustomed to or interested in the notion of "collaboration" might -- even unknowingly -- dominate meetings with their own personal agendas and effectively intimidate or "turn off" other members. Some members might use meetings as a soap box for personal grievances (perhaps not even related to the topic at hand), especially where there are no other mechanisms (like a strong union) for airing personal concerns. In workplaces where a particular stakeholder group normally does the decision-making, it will be hard for members from other groups to make their voices heard. This is particularly true in workplaces where the workforce has a significant number of immigrant workers. Their particular language abilities and cultural backgrounds might make it difficult for them to "speak up" in a team process.

f. If confidentiality is not respected, the team evaluation can needlessly jeopardize the security of those involved. A good deal of trust and procedures for ensuring "security" need to be in place to make this process work. If those asked to speak frankly are not sure that what they say will not be used against them or someone else, they will not likely be willing to say what is on their minds.

g. Team evaluation requires special knowledge and procedures to minimize bias and ensure validity and reliability. As is true with any form of evaluation, the findings of a team evaluation could end up being biased, unreliable, or invalid. This could be due to team members' bias or lack of experience.

h. It is difficult to introduce a "team" approach to evaluation in a program or workplace not already "team-oriented." As stated under "Strengths" above, a workplace already oriented to team decision-making can be a fertile context in which to conduct a team-based evaluation. Converely, workplaces (and education programs) structured along more traditional lines might not understand -- or might even resist -- the notion of team evaluation. In either case, team members need to be shown how to apply team decision-making to the particular task of education program evaluation.

3. Recommendations for those interested in trying team evaluation

a. Evaluation teams need to have or create:

- Time to do the work
- Interest; motivation to build a better education program and workplace and provide new opportunities for workers; a recognition of the value of this evaluation process; a willingness to share decision-making with others and try something new.
- Expertise to perform the various thinking, communication, and other tasks required by the process.
- A supportive context: a host organization which provides an audience for the evaluation and an infrastructure (for example, meeting rooms, a computer for data-analysis and report-writing, release time for staff to participate) where members can reinforce the team skills to be used in the evaluation process.
- A "code of confidentiality" ("trust") and procedures for maintaining the confidentiality of team activities.
- An ethic of continuous improvement; seeing evaluation as an opportunity for creative, constructive criticism to improve the organization and the education program.

b. To ensure that teams have the above elements in place, those organizing teams should use the following team-building activities :

- Select members carefully. Key decision-makers in the organization-- which include not only "higher-ups" but supervisors who can encourage or inhibit learner participation -- need to be "on board," supporting the team even if not actively involved in all its activities. Conversely, "trouble-makers" or people with "chips on their shoulder" might have to be screened out.
- Negotiate members' roles and those of others (for example, co-workers need to know why they are being invited to a focus group and groundrules for participating) involved in the evaluation. Set groundrules which all members agree to follow.
- Stress the need for continuity within the team and, therefore, commitment of members to carry out their responsibilities.
- Provide extra training and technical assistance required to develop necessary attitudes and perform particular tasks. Team members, for example, might be willing but unable to help conduct interviews simply because they never interviewed anyone before. Facilitators in various sites might develop a "buddy system" among themselves, to enable them to give each other feedback and moral support as needed.
- Organize team activities in ways which will allow *all* members to participate actively. For example, translators might be necessary for some members, or reading tasks might be reduced to allow members with more-limited reading abilities to get access to information.

• Set a "climate" of respect, willingness to listen, and a positive vision in all interactions with the team.

A facilitator might find that, even after carrying out the above team-building activities, it appears that it will not be possible to form a coherent team. The facilitator should be prepared to "just say no" to the notion of conducting a team evaluation. She or he might instead suggest that the program arrange for an outside evaluator to come in. Or the program might postpone the team evaluation idea until a time when stakeholders are ready for one.

c. Teams need to customize, refine, streamline the process to fit it to the unique needs and opportunities of each site. Members should carefully calculate what they want to accomplish and how much time and expertise they can give to the process. Facilitators should present do-able, practical tasks, organized in "chewable chunks," which produce clear rewards. Facilitators should avoid overly-academic or technical language in team meetings, keeping activities short and simple. This is done to make the process the most efficient and meaningful one possible. At the same time, streamlining must not jump over or eliminate elements which are vital to an effective evaluation.

d. Teams should clarify where evaluation fits into the larger program planning process. Ideally, teams would begin their evaluation work in the early stages of planning the program rather than after the program is already underway. Teams should also be clear about the difference between "assessment" (normally thought of as measuring individual needs and progress) and "evaluation" (a larger process of clarifying what is being achieved and deciding further actions related to the program).

e. Teams should consider calling on the expertise of an outsider if necessary. While the team evaluation process encourages members to take ownership for evaluation activities, it is a real possibility that some teams will not be able to carry out every task required. In such cases, teams should consider calling on someone from outside the team -- perhaps a professional evaluator -- to carry out some of the tasks either alone or with other team members. For example, if the team wants to generate statistical information and manipulate it in a computer database, perhaps someone with that expertise might be brought in from the local college to set up that system.

Team members can be the judge of how much responsibility they want to give to someone else, so they can avoid turning the evaluation into a more-traditional, "outside" evaluation in which members would essentially abdicate responsibility for the process. If an outsider is brought in (to, say, design a questionnaire or conduct focus groups), he or she might show other team members how to perform particular tasks so they can do them themselves the next time.

f. Teams should "get their feet wet" quickly. Teams should not be afraid to "jump in" and try collecting some information, analyzing it, reporting it, and acting on it. This can serve as an initial trial run which produces both useful data, useful expertise, and useful, concrete results. Members should not make a "big deal" out of it, dragging out the process, postponing unfamiliar tasks out of fear or a desire to "make everything perfect." When that happens, teams will likely lose or change focus and feel they then have to start all over again. Instead, members should keep in mind that the more they do it, the easier it will be.

As members gather information, they should review it and decide on appropriate actions. Avoid prolonging getting to the "action" stage. Otherwise, members might start wondering why they are gathering so much information without getting to any concrete action.

g. Teams should understand that their goals for the program will change as they learn more about it. Rather than take this as a sign that their original goals were "off target," members should welcome this change. It is a sign that the program is growing and that the team is trying to improve it by making it more relevant. Funders should also recognize this and give teams time to continually re-assess their goals as the program evolves.

h. Teams should develop evaluation procedures consonant with the culture of the company and education program. Some teams might want a relatively quick snapshot of how the program is doing and any problems that need to be attended to. In such a case, a team might simply sit down and listen to what learners and other stakeholders have to say in one or two focus groups. Other teams might want a more-formal, longer-term, in-depth study. Such a study could be done through ethnographic interviews and observation and come in a narrative "case study" format. For those oriented toward "hard data," a more-formal evaluation might also present statistics acquired through structured interviews and questionnaires and perhaps some kind of customized "test" or study of company production records or changes in the organization and learners. Teams should realize that each of these methods of gathering, analyzing, and presenting information has its advantages and disadvantages. Narrative information should not automatically be dismissed as "lite" or "too soft;" "statistics" shouldn't automatically be seen as too technical or insensitive.

Teams should also be sensitive to the natural ways people communicate and make decisions in the company. In many cases, focus groups might be more productive ways of eliciting employees' ideas than structured, written questionnaires.

Each team should choose the evaluation procedures which make sense within the particular culture of the company and education program.

i. Teams should use resources which are familiar and accessible. For example, the company or educational institution might already use a database program for other data-analysis purposes. The education team might get access to such a resource rather than have to purchase a new one and train people to use it. Similarly, the team might call on the company communications department to help prepare an attractive version of the team's report. Members might also participate in training workshops available through the company training department or a local education institution which could help members develop expertise the team needs.

j. Teams should balance "product" with "process." It is understandable that most team members will get involved in an evaluation with the hope of producing some kind of clear "product." In this case, product is thought of as some kind of "clear evidence," "data," or "a report" which they can use to make decisions with and/or show to the program's supporters. Generating useful, readable, relevant information and getting it into the hands of intended audiences are important, as they provide tangible rewards for the team's work.

Members should keep in mind, however, that generating reliable and meaningful information requires work. They should also realize that the very process of sitting members down and giving them an opportunity to talk about the program has value. Such dialogue can build trust, understanding, shared ownership, and other support for the program. It can build a team identity and team skills which carry over into other aspects of the organization. Teams should see these benefits of the team process as "products" of possibly greater value than a neatly-packaged set of statistics or report.

k. Teams need to be realistic and fair in what they expect from an education program. Teams shouldn't expect a short-term basic skills program for a few workers to solve problems which are longer-term, company-wide, and more-complex in nature. Teams should consider doing a comprehensive workplace needs assessment, to determine what factors interfere with productivity and quality of work life. In turn, such an assessment can identify the range of initiatives a company might take to deal with those obstacles.

If, for example, employees have trouble reading work orders, it might be because the orders are poorly written; in such a case, a clear-writing initiative might be in order. If workers generally show limited interest in solving problems, it might be less due to lack of problem-solving skills than to a faulty incentive system; perhaps their interest could be increased through an employee-stock-ownership plan. Workplace education could thereby be seen -- and evaluated -- as one of a number of changes an organization might undertake to maximize its human potential.

l. Teams should beware of intra-organizational politics. Teams need to remember that they are not operating in a vacuum and that the "politics" of the workplace will likely impact the ability of team members to collaborate. The team process can help resolve lingering suspicions and adversarial or "co-dependent" relationships by giving all stakeholders opportunities to express their views. Members should realize, however, that some stakeholders might find it difficult to participate actively due not so much to the team process as to the "baggage" they carry with them from other relationships they have in the workplace.

m. Funders and other "higher-ups" should show interest in the team's activities without interfering in them. Teams often cite funders and other "higher-ups" (e.g., high-level officials in the company, union, or educational institution) as primary audiences for their evaluation reports. If those audiences set a positive "climate" and demonstrate their interest in what the team finds, the teams will likely be motivated to do a good job. Conversely, if those "higher-ups" politely ignore the team and its findings, the team will have to look elsewhere for its motivation. Funders et al should not, however, get overly involved in the team and effectively dominate the process or distract members from what they want to focus on.

n. <u>Teams should make recommendations which are realistic</u>. Most evaluations will conclude that "if only we had more time and money, we could make tremendous strides." While such conclusions are probably true, teams need to be realistic in what they recommend in their evaluations.

BULL WORLDWIDE INFORMATION SYSTEMS

Brighton, Massachusetts

A Case Study Prepared by Laura Sperazi

I. PROGRAM BACKGROUND

Program history

Bull HN, Inc., is the American wholly-owned subsidiary of the French-owned Bull Worldwide Information Systems. The Brighton plant is a medium-sized manufacturer of electronic circuit boards located in Brighton, Massachusetts. While other manufacturing plants here and abroad have consistently shown a loss -- including other plants in eastern Massachusetts -- the Brighton plant has consistently shown a profit and helped to offset overall losses for the parent company.

Competition for cheap and well-made electronic circuit boards has become very keen in the international marketplace. The Brighton plant is changing its organization of work in order to continue to compete successfully. The essence of this change is that self-managed work teams assume more and more control and responsibility for all phases of work. In addition, the company has recently become ISO 9000 certified. This means that workers are required to read and follow standard operating procedures contained in training and work documents. The combination of the shift to self-managed work teams and maintaining ISO 9000 certification has made good communication, reading, and writing skills for all workers necessary and critical.[1]

Program goals

The workforce of the Brighton plant is culturally and linguistically diverse. Of the 400 "associates" employed in both the "B" Shop (where the circuit boards are made) and

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[1] This and other descriptions of the Brighton plant contained in this case study refer to conditions from November 1992 to November 1993, the time during which the team-based evaluation was piloted. Since January 1994, conditions at the plant have changed significantly. For example, many associates are now required to work twelve hour shifts -- and others work copious amounts of overtime -- in order to complete quick-turn-around orders. With associates pressed to manufacture and deliver products as quickly and efficiently as possible, education and training appear to become less important. Although it is acknowledged that associates need to improve their skills more than ever, in the face of rigorous production schedules, the ESL and basic skills program are poorly attended. Associates, supervisors and other managers who were very supportive of expanded education programs simply have to "put production first."

the "A" shop (where printed circuits are added), approximately 100 do not speak English well. The associates are Italian, Portuguese, Cape Verdian, East and Southeast Asian, and Asian Indian immigrants. Some of these associates have been with the plant for five years or more and have a good performance record, but are now being challenged to communicate in English at a level that they would not have thought possible a few years ago.

Management is committed to keeping these associates employed but the underlying message is indisputable: if you cannot keep up with the changes, your job might be in jeopardy and the plant might fail. An on-site ESL program seemed a good place to begin to provide the kind of educational support for acquiring English communication skills that these associates need. It was also understood that other associates need other types of basic skills instruction and that, in the future, the program might serve them as well. The eleven formal goals which the Planning and Evaluation Team (PET) generated and which guided the evaluation process are described in the Goals Matrix on pages 19-22.

Description of program

Twenty-eight associates were enrolled in the ESL program. Three classes were offered to accommodate shifts and personal schedules. Classes were held twice a week for two hours. If an associate attended class during a shift, s/he was given full release time. If an associate attended class before or after a shift, s/he was compensated at time and a half.

From November 1992 through August 1993, the Bull Brighton plant ESL program was partially funded through a grant from the Boston Mayor's Office of Jobs and Community Service with
Training Partnership Act (JTPA) 8% set-aside moneys. The company supported the program before, during, and after the grant period. The Brighton plant's educational partner is the Adult Literacy Resource Institute, a project of Roxbury Community College.

II. BACKGROUND ON THE TEAM

History of the team

The first meeting of the PET took place on November 20, 1992, a few months after the program began. David Rosen, the Program Coordinator, was familiar with the researchers' team evaluation model and had agreed -- with the consent of other team members -- that the Bull Brighton ESL program would be a good site for a trial of the method. He invited researcher Laura Sperazi to the first PET meeting, so that she could briefly introduce the evaluation process that the team would implement that year. She was to serve as facilitator at this site.

The concepts of working as a team to conduct an evaluation and linking evaluation findings to planning were already very familiar to Bull employees. Team-based management had sufficiently taken hold within management that most team members normally conducted their business in teams and were familiar both with setting goals and determining how they would know whether their goals were being met. This familiarity with team procedures meant that Ms. Sperazi's introduction of the team-based evaluation process was not surprising to most members. As the year progressed, team members would disagree to some extent on what the evaluation should measure and the time to devote to evaluation, but not on the fundamental process.

Stakeholders represented on the team

The members of the team included:

- Jane La Branche, Director of Training
- Dick Henderson, Director of Personnel
- Manuel Palomino, Training Intern
- Mike Balas, Plant Manager, "PWA"
- Ken Manganaro, Plant Manager, "PWB"
- Alberto Vigianni, Associate and student
- Reginalda Camaro, Associate and student
- David Rosen, Director of the Adult Literacy Resource Institute, and Program Coordinator
- Jim Ward, Curriculum Developer
- Melvina Green, Teacher
- Annie Yu, Teacher
- Sharon Parmalee, Training Intern, replaced Manuel Palomino in September 1993 and was later hired by the company as Program Coordinator
- Ken Robbins, Supervisor, began attending meetings in September 1993

III. THE PROCESS WHICH THE TEAM WENT THROUGH

Summary: Between November 20, 1992 and October 17, 1993, Laura Sperazi met with the Bull PET approximately twice a month for two hours. True to the purpose of a PET, team members met to discuss a broad array of program planning issues as well as how to proceed with the evaluation. As a rule, the evaluation would be one item on the agenda along with other program planning-related items. However, when the work of the evaluation intensified -- for example, when we were developing survey questionnaires or protocols for focus groups -- a PET meeting might be devoted exclusively to evaluation issues.

In the late spring of 1993, PET members agreed that a subcommittee of the PET should focus their attention on evaluation. It was getting tedious for the plant managers and other company personnel to be involved in all the details of the evaluation process. As a result of the frequency of meetings and the regular linking of evaluation issues to program planning, the evaluation facilitator functioned more like a member of the team in this program than in other settings where the number of meetings was fewer and the facilitator role more limited.

Between the late spring and early winter the PET prepared, gathered, analyzed, informally reported, and integrated into program planning information which was gathered in seven different ways:

- a student survey
- a managers' survey
- three focus groups for students
- two focus groups for managers
- IEPs (Individual Education Plans) for students
- a pre-post reading assessment for students
- informal exit interviews

The data from these sources indicate that, overall, the Bull ESL program achieved most of its goals at least partially. (See Goals Matrix, pages 19-22.) The program was poised to expand significantly when, unexpectedly, business conditions required a major reorganization of shifts and work schedules. As of this writing, the ESL program has only a few associates enrolled.

Phase I: Initial preparations

Program coordinator David Rosen introduced team-based evaluation to the PET before he invited researcher Laura Sperazi (who was to serve as facilitator at the site) to talk with the group. He was better prepared to make such an introduction than other coordinators might be because he had worked with the researcher on a prior team-based evaluation project.

In addition, Ms. Sperazi (hereafter referred to as "the facilitator") prepared for working with the team by taking several tours of the plant and discussing issues related to the ESL program with the Training Director, the Engineering and Training Intern, the teachers, Curriculum Developer and Program Coordinator. The facilitator also wrote a letter to the Training Director and the Training Intern which explained the history and purpose of team-based evaluation. She then prepared materials for team members which outlined the steps of the evaluation process and a possible timeline.

Phase II: Planning the evaluation

It took roughly six months for the team to plan its evaluation. During that time it (1) revised its program goals several times; (2) clarified the differences between evaluation and assessment; (3) grappled with the fact that it had not collected base-line data of any kind other than a series of "placement" assessments in reading, writing and listening; and (4) tried to reach consensus on what the focus of the evaluation should be.

Before it settled on a focus and data collection methods, the team also fortified itself in two additional ways:

First, selected team members met with members of two other PETs (from the Haartz Corporation and the Norton Company) to share ideas about how to focus an evaluation of a workplace education program.

Second, anticipating the need to present the results of their evaluation in statistical form, selected members participated in a day-long training on the use of the Statistical Package for the Social Sciences (SPSS), a database program. (Steven Andrews and Alice Oberfield Andrews conducted the training and were available for telephone consultation afterwards.) Although some of the SPSS training focused on actual manipulation of the database, much of it focused on how statistical analysis is only as good as the information collected. This further stimulated the team to think through the focus of their evaluation -- a question which team members had much on their minds as they entered the training. In the end, the team chose not to use SPSS for data analysis. The data which the team collected did not warrant such analysis. There was some discussion about additional training for Bull support staff in the use of the database so that it could be used in the future, when the data warranted it.

Clarifying program goals and the information to look for

The program goals which the team finally agreed on for the purposes of the evaluation are presented in the Goals Matrix on pages 19-22, along with an assessment of whether they were achieved or not.

Questions about the kind of information the team needed to collect about the ESL program in the short and long term are best summarized by the events of the SPSS training.

Jane La Branche, the Training Director, came to the SPSS training with questions about the evaluation's direction to date. Basically, she said that at this point in the development of the program (five months), it was unfair to measure the success of the program by how well it meets long-term organizational needs. She said that, at this time, the heart of the evaluation needs to be on measuring and documenting the improvement of participants' language skills. What level of language skills are needed to help bridge associates to other training? How fast can the company expect associates to approach this level of skill? Are associates progressing?

At some point, she said, it would be appropriate to determine if the program is having an effect on the organization. She said that the team should think about these issues now, in order to be well-prepared to evaluate them down the road. For now, however, the focus of the evaluation should be on improvement of language skills. What the team learns about improving language skills should be used, in turn, to improve the program.

Jane's comments got everyone thinking again about the kind of evidence it is important to gather both to help Jane argue effectively with management for continued support of the ESL program and to improve the program. In fact, the team shared a tacit assumption that the evaluation should expose opportunities to improve the program -- as opposed to determine whether the program should continue or not. (Some team members later said that they felt artificially driven by grant requirements to evaluate program and student outcomes when, at this early stage of program development, outcomes were not their main concern.)

The conceptual model that the team agreed they were working from looks like this:

Language Skills/Competencies

Participation in the ESL Class

Organizational Outcomes

"Willingness"
(to learn and to change)

This model assumes a connection between acquisition of language skills and competencies and organizational outcomes. It also assumes a connection between "willingness" to learn and to change and organizational outcomes. "Willingness" was intended to describe those personal, affective changes which occur when people enjoy learning and which affect organizational outcomes in the long term. The group decided not to try to measure "willingness" at this point. Rather, it would focus on improvement of language skills and competencies.

The team made the following suggestions about the focus of the evaluation at this time:

(1) Revisit the Placement Assessment (which Annie Yu, one of the teachers, designed and which all program participants have taken) as a pre-test which can be given again as a post test, and which can be scored in a way to demonstrate individual progress over time. The point here is that there is a system already in place that can be built on to provide more complete pre- and post information on all students than is currently available.

The SPSS trainers had some specific suggestions for designing the post test based on the placement instrument. [2]

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[2] These suggestions included the following and were based on designing post-tests for reading, listening, speaking and writing: (a) Score each part of the test so that the final score is more than one number; (b) It may be useful to score the final test as one number

(2) Design a pre/post test using the most important competencies that Jim Ward, the Curriculum Developer, is already in the process of identifying. Again, the point is that there is a system about to be put into place that can be built on to provide more complete pre- and post- information on all students than is currently available. There seemed to be agreement in the training that this would be a logical -- and fairly easy -- thing to do.

(3) Assess model associates to determine their level of skill as a standard for participants in the ESL program to reach toward. Jane had expressed interest in knowing what level of language is sufficient for workers to participate in other training programs. The SPSS consultants described this task as "definitional." The strategy suggested to define -- even in broad terms -- the level of skills necessary to perform well was: assess model workers with the same or similar assessments used with ESL program participants. This will give the staff and Jane a good idea of what the program should be working toward.

(4) Include a student self-report as part of assessment of progress. Team members agreed that students' reports of their own learning are an important part of a complete evaluation. Mel Green, a teacher, has begun collecting students' self reports in class, with a particular focus on how to improve the program. The team members present at the training suggested that the student self report might be part of the IEP.

(5) Gather systematic supervisor feedback on the effects of the program on work. Although much of the training focused on measuring progress from the teacher's perspective, some time was spent thinking through the value of getting supervisors' perceptions of how class learning is translating into changes in behaviors at work. A simple survey could be the first link in the evaluation system which ties to organizational effects. Even a small survey could provide data over time which would supplement the more skills-based data, and provide Jane with stronger arguments for continued company support of the program. Jane said that this type of survey would not provide sufficient evidence of program success on its own, but would be meaningful when combined with other data. Team members present at the training also discussed the possibility of surveying other people like associates not enrolled in the program or other managers. These people would simply provide additional information on the extent of associates' improvement in English; they would not constitute a control group.

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as well, and that number can be a range from, for example, 1 to 3. This means that if an associate scores a 4, s/he is ready to "bridge" out of ESL to another training. The point here is that it is necessary to identify when associates have developed their skills enough that they are ready to leave ESL and move on to something else ; (c) Eliminate the choice of stories to read in the post test. Standardize the stories used in the post test to match the levels of the stories used in the pre-test.

At this point in the evaluation it was important for the team to make choices about next steps in light of the resources available. How much time and creative energy are needed to move forward on each of the recommendations/actions outlined above? What are the team's priorities?

The team reviewed another set of materials before it made final decisions about where and how to focus its evaluation. These materials are the seventeen quality indicators for workplace basic skills programs which were developed by the Massachusetts Workplace Education Initiative. The indicators (Appendix A) identify and set standards for the essential components of a quality basic skills program.

When the team reviewed these indicators in March, members felt that it would be overwhelming to entertain all seventeen indicators. They agreed that the team should set aside a whole day to review the indicators and assess the program against them. (The team did this in late August.) Members agreed that, for the present, the evaluation should consider one indicator -- the extent to which the program is providing a quality learning environment for the associates.

Designing a strategy for gathering data

The overall strategy which the team developed for gathering data was:

(1) The team discussed the issues until it clarified the kinds of information it wanted to collect (as described above).
(2) With additional input from the team as needed, the evaluation facilitator developed a draft instrument to collect the desired information.
(3) The team would then review and revise the instrument.

Often the process of revision took place in three or four phases. The team would review what the evaluator had done; the evaluator would then revise the draft and submit it for review again.

In the late spring team members agreed on a strategy for gathering the data it wanted. There were still differences among team members about whether it was desirable to assess decontextualized communication skills (reading, listening, speaking, and writing as stand-alone phenomena) but it seemed fair to try to develop a way of assessing improvement in writing skills (using the placement assessment as a base-line) as one part of the evaluation. (Possible use of the BEST was discarded after consulting with experts about the limited value of available standardized tests.)

Student and manager surveys and focus groups would allow the team to gather information both on the perceived quality and appropriateness of the learning environment being provided and the changes in students' work and personal lives which result from participation in a company-sponsored ESL course. The team also agreed to continue specifying competencies for the IEP for teachers in subsequent classes. These competencies would include both work-specific and general communication competencies.

The team also suggested at this time that formal exit interviews of key staff and students be conducted by the evaluation facilitator. (The facilitator was able to conduct only informal interviews at the end of the project. See Goals Matrix. on pages 19-22.)

There was one more resource available to the Bull team for input on how to think about evidence, measurement, and instrument design in general, and how to develop a post-test based on the placement assessment. That resource was Donald Cichon of Donald Cichon Consultants. The team had been coming to the conclusion that it would not be possible to create a meaningful post-test given the lack of quantifiable base-line data in reading, speaking or listening but that it might be possible to do something meaningful with writing. He met with the team and made suggestions about how to design and score a writing post-test.

<u>Phase III</u>: Gathering, organizing, analyzing, and reporting the information

Gathering and organizing the data

The Curriculum Developer, and later the Training Intern, along with the evaluation facilitator were responsible for carrying out the data-gathering activities. For example, the Curriculum Developer oversaw the administration of the student survey as a class activity in all three classes and distributed the managers' survey to the appropriate managers. The Training Intern conducted background interviews for the student survey and the first supervisor focus group. The evaluation facilitator conducted three student focus groups and one supervisor focus group.

Once the data were gathered, the Curriculum Developer, Training Intern, and evaluation facilitator were also responsible for organizing the data. For example, the Curriculum Developer provided a simple tally of the frequencies of responses to the student survey. The Training Intern provided a simple tally of the frequencies of responses to the student background survey and organized a summary of the discussion points of the first supervisor focus group. The evaluation facilitator organized a summary of the discussion points of the three student focus groups and the second supervisor focus group.

Analyzing the data

Once the data were organized, the facilitator offered an analysis of the data to the team and the team would discuss that analysis -- always enriching the analysis in ways that only staff "inside" an organization can.

For each of the six data-gathering activities which the team undertook, and which are outlined below, are additional information on the type of data gathered, its organization, and the team's analyses.

Student Questionnaire

The purpose of the student questionnaire was two-fold: to assess the extent to which the students believed the program was providing a quality learning environment, and to assess self-perceptions of change in communication skills at work and in life outside of work.

In early March, the Training Intern conducted informal interviews with ten students in order to gather information with which to develop survey items. This information focused on identifying the standards of a quality learning environment from the students' perspective. (See Appendix B.) After the team developed the student questionnaire, the Curriculum Developer piloted a draft of the questionnaire with two students who were also members of the PET to ensure reliability and validity of the instrument. (See Appendix C.)

Twenty of the twenty-eight students enrolled at the time completed the survey. The Curriculum Developer organized the raw scores so that the facilitator could easily interpret them. (See Appendix D.)

Students assessed the quality of their program overall as very high but did not assess their changes in communication skills very high. Two issues emerged that generated particular interest and curiosity within the team: (1) students appeared to say that the curriculum focused too much on work-related issue, and (2) in a program that they praised so highly, students self-reported relatively little change in their communication skills. These issues were followed up on and clarified in focus groups.

Student Focus Groups

The student survey was followed by three student focus groups -- one for each ESL class. The facilitator conducted these groups with support from a new ESL teacher during three class periods.[3] (See Appendix E.) The focus groups clarified the two issues identified above and provided important information about the students' feelings about computerized instruction.

First, the students did not think that the curriculum focused too much on work-related issues. They found the question on this topic in the questionnaire confusing

[3] The evaluation facilitator conducted the student focus groups on the first day of class with the new ESL teacher. The focus groups proved to be a wonderful introduction to both the students and program for the new teacher. However, had the teacher been teaching the class -- even for a short period of time -- her presence would have compromised the focus group process. The students needed to feel that they could speak freely and honestly about their program. This would have been difficult or impossible with a well-known teacher in the group.

and did not answer it to reflect their intent. The focus group clarified that students understand very well the importance of a work-related curriculum. They understand that the future of the company depends on how flexibly they can perform their jobs, which depends on how well they can communicate in English.

Second, the students were very harsh in their assessments of their improvements in communication skills because they do not feel that they can speak at the level at which they want to speak. They are impatient to achieve their life-long communication goals. They want more instruction in speaking skills. They want to be able to practice their English with a proficient English speaker, not another non-native speaker of English who cannot speak English well.

Third, students looked favorably on computer-assisted instruction but did not want it to replace real conversation with a teacher.

Managers' Survey

A total of four supervisors completed the managers' survey. It was distributed by the Curriculum Developer and results were tallied by the facilitator. The survey contained twenty items for which the supervisor was asked to assess change in each associate under his/her supervision from the year prior to ESL class (1992) to the current year (1993). The four supervisors completed a total of fifteen surveys. There was a total of twenty-eight associates enrolled in the ESL program so thirteen associates are not represented. (See Appendix F.)

Of primary interest was whether the supervisors witnessed any change and, if so, on which items. The results are striking. Most supervisors report very little change:

- For three associates, supervisors report no change at all.
- For two associates, supervisors report change on only one item.
- For another two associates, supervisors report change on three items.
- For four associates, supervisors report change on six items.
- For one associate, a supervisor reports change on nine items.
- For one associate, a supervisor reports change on thirteen items.
- For one associate, a supervisor reports change on fourteen items.
- For one associate, a supervisor reports change on seventeen items.

The obvious question was why the supervisors noted so little change. Was this a reflection of the poor quality of the ESL program? Or were there other factors at work that deserve attention? For example, do the supervisors have enough contact with the associates to be able to make an observation about change in communication skills? And do the associates have the opportunity to apply all the skills they acquire in the classroom to their work on the floor? The managers' focus groups attempted to answer these questions.

Managers' Focus Groups

There were two focus groups with managers (also referred to as supervisors). In addition to providing an opportunity to gather information from the supervisors, the focus groups were also seen as an opportunity to educate management about the ESL and basic skills program and to enlist their greater support of and involvement in it. (See Appendix G.)

Three supervisors attended the first group (which was facilitated by the Training Director) and four attended the second (which was facilitated by the evaluation facilitator). In general, supervisors corroborated the results of the survey. They did not see much change in the associates who were enrolled in the ESL program. The reasons for this are varied.

First, supervisors do not have a lot of one-on-one contact with associates in the course of a week and do not have the opportunity to assess the kind or quality of change in communication skills that is taking place. Second, as a rule, people whose first language is not English tend not speak in English at work. Even if their English language skills are improving, the culture of the floor does not encourage associates to speak in English. The opportunity to witness any change is thereby diminished further. Supervisors stressed that all the associates are "good performers" and that "good performance is not the issue."

At the same time, it was easy to see some dramatic changes in the few associates who do "interface" with supervisors and engineers and who are exceptionally motivated.

Supervisors agreed strongly that there was a need for more communication in English on the floor. The management focus is on developing a self-managed workforce. There was consensus that the company is still "light years away" from having a self-managed work force and that making English the common language of work on the floor is essential. Supervisors agreed that the ESL class should stress self-initiated conversation in English. Supervisors expect that the ESL staff will stress the importance of speaking in English for interpersonal communication and for work. Supervisors underscored that it is a false expectation that people will speak English on their own when it is not their first language. Structures must be in place to encourage and support them both in the ESL program and on the floor.

With hindsight, the results of these focus groups highlight how critical it is to clarify supervisors' expectations for what a workplace education program will achieve when the program starts. Program staff can educate supervisors about realistic expectations; but, often, program staff also need to learn what these expectations are themselves -- as was the case at Bull.

Supervisors also made the following points:

• Supervisors should become part of the IEP process. Supervisors agreed that being part of the IEP process was a good idea. It gives a supervisor a good basis for evaluating what a person can accomplish. There was a lot of discussion about how associates' personal goals should also be integrated into the IEP and shared with the supervisor -- so the supervisor can support the associate in achieving those personal goals. There was also agreement that the associate should feel at the center of the process -- making choices about what to share, what to commit to, etc.

• The curriculum should take a broad view of what is "work-related." The ESL program can support supervisors and the company's overall well-being by bringing issues of "quality, cost, and delivery" into the classroom and curriculum. The program should emphasize that "people are responsible for their past, present, and future," not to "get people nervous," but to show that "the company needs 100% support." The program should give specific examples of why it is important to develop a certain skill. The focus of the curriculum should be: what facilitates team-based work? There should be discussions about what a self-managed team is, and the problems that associates anticipate they will encounter in this new mode of work.

• Diversity issues should be addressed in the curriculum. The question is: How does the message that you can't do something get conveyed to associates, and what role does cultural diversity (racism, prejudice, ignorance) play in the sending and receiving of that message? In addition, diversity issues keep the students engaged. Since it is true that the ESL curriculum "can't do everything," diversity training is something that the company might offer as a refresher course in diversity issues for everyone, and then the ESL curriculum can support it.

• Regular focus groups: Supervisors agreed that it would be good to have a half-hour focus group between supervisors and ESL staff every six to eight weeks to keep up with the program.

Writing Assessment

The results of the writing post test demonstrate that associates made progress in writing during their enrollment in the ESL program.

Individual Education Plans

In order to ensure that the competencies in the IEPs are the competencies which management believes to be the most important, the Curriculum Developer surveyed supervisors and asked them to rate the priority (high priority, priority, low priority) of fifty items which might be incorporated into the IEPs. (See Appendix H.)

The IEPs for the grant period demonstrate that associates achieved the desired competencies in the ESL program. See Goals Matrix, below.

The Goals Evaluation Matrix

The following Goals Evaluation Matrix presents the program goals along with the data-collection procedures used to collect information related to those goals. On the basis of the information collected from the sources just described, an assessment is made about whether the goals were achieved or not and, if they were achieved, to what extent were they achieved. An asterisk indicates that the assessment needs some explanation. The explanation is provided at the end of the Matrix.

Bull Workplace Education Program
Goals Evaluation Matrix

• = This goal was evaluated
A = This goal was achieved, as indicated by the related measure
AP = This goal was achieved partially, as indicated by the related measure
NA = This goal was not achieved
= See notes at end of Matrix

INSTRUMENTS/PROCEDURES FOR DOCUMENTING AND MEASURING GOALS

GOALS						
1. Provide appropriate learning arrangements to associates in the program.	**•A**	**• A**				
2. Identify and enable associates to acquire oral communication (listening and speaking), reading, writing, and math skills needed to participate in self-managed work teams, collaborate in data collection, and conduct themselves productively in meetings. * 1	**• AP**	**• AP**	**• AP**	**• AP**	**• AP**	**• AP**
3. Enable associates to be ready to						

participate in Bull's standard computer training course through: a. helping associates acquire necessary listening and speaking skills, and basic knowledge of what computers can do, and	• **A**				• **A**	
b. providing suggestions to computer training course instructors on how they can help limited English speaking students who enroll in their course to succeed.						
4 Identify and help associates acquire listening, speaking and writing skills needed to participate in other Bull training courses and in on-the-job training				• **AP**	• **AP**	

INSTRUMENTS/PROCEDURES FOR DOCUMENTING AND MEASURING GOALS

GOALS						
5. Enable associates to read, write and interpret documentation needed for daily work (e.g. S.O.D.'s, blue-prints, etc.) a. as indicated in ISO 9000 guidelines	• AP	• AP	• AP		• AP	
b. for safety (e.g. Right to Know Law, reading M.S.D.S. and safety signs) c. for quality						
d. to understand company policies and company communications						
6. Help associates acquire listening, speaking, reading and writing skills needed to participate in the Performance Appraisal Management Process a. interviewing						
b. reading and understanding performance appraisal forms c. assessing their goals					• AP	
d. negotiation skills						
e. peer assessment skills (listening and speaking skills needed for communication with one's "internal customers")						
7. Classroom activities should model the behaviors that management and employees at Bull are trying to achieve in the organization (i.e. teamwork, open communications, etc.)						
8. To enable associates to achieve their personal learning goals, related or not to the workplace. *2	• AP		• AP		• AP	

INSTRUMENTS/PROCEDURES FOR DOCUMENTING AND MEASURING GOALS

GOALS						
9. To enable participants to achieve their learning goals as stated in their Individual Education Plans through the application of a competency-based curriculum. We expect 80% or more of the participants to attain 80% of the competencies outlined in their Individual Education Plans within the grant period.					• **A*3**	
10. Furthermore the program will: a. establish itself as a program that will continue and develop beyond the period of grant funding						• **A**
b. establish, maintain and improve a basic skills needs assessment						• **AP**
c. establish an ongoing planning and evaluation team						• **A**
d. take full advantage of Bull's computer lab by offering computer-assisted basic skills instruction						• **A**
e. foster in all employees a mindset of lifelong learning, continuous learning	• **AP**		• **AP**		• **AP**	
11. The program will build a strong education and training partnership between Bull, Roxbury Community College, and the community-based education programs supported by Roxbury Community College's Adult Literacy Resource Institute						• **NA**

GOALS	INSTRUMENTS/PROCEDURES FOR DOCUMENTING AND MEASURING GOALS					
11. continued a. To develop a referral relationship with the Jackson Mann Community Center's adult learning program and with Roxbury Community College's Division of Continuing Education and Community Services ESL programs, to serve associates who have earning needs beyond the current capacity of the program, or associates who want to meet their learning needs outside of the work environment.						• **NA**
b. To develop a long-term referral relationship, and possibly continued worksite programs with the previously named centers for associates who may need continuing education (GED or External Diploma Programs) *4						• **AP**

Notes on the Matrix

The following notes summarize the comments of the members of the planning and evaluation team who worked most intensively on the evaluation, and who reviewed the goals matrix after the evaluation was concluded.

*1. This goal is too big and therefore difficult to assess. The skills should be broken out so that listening, speaking, reading, writing and math are evaluated separately.

*2. If this goal had been phrased "work toward their goals" instead of "to achieve their goals," it would have been fully achieved. It was impossible for most associates to achieve their goals in a ten-month period because their goals were very ambitious and would take years to achieve. However, all of them did work toward their goals with success.

*3. The team does not have full confidence in this measure. The teachers -- who rated the IEPs -- were fastidious in their record keeping and can subjectively substantiate their assessments of students' progress. But they were, in fact, developing the IEP process as the grant year progressed. This means that they did not have a fully developed process in place at the beginning of the program which they followed, with base-line data against which they made an objective assessment of achievement of competencies. At the end of the grant year they did have a process in place that they felt very confident about and which subsequently-hired teachers are now using. After the evaluation was completed, two members of the Planning and Evaluation Team commented that this might be a reasonable way for a new program to proceed.

*4. Educational services were expanded internally -- not in relationship with community agencies -- to include ABE and GED.

Preparing a strategy for reporting the findings

At the time that the evaluation was conducted, the evaluation team was the primary audience for the results of the evaluation. Members understood that the evaluation system was just getting worked out. They felt that they could use their preliminary findings internally to develop the program. However, there was an understanding that, eventually, evaluation results could be used to argue for program continuation and expansion. The team wanted to first critically review the information being gathered, and their interpretations of it, before they reported results with any confidence to management or other audiences.

Within the team itself, members communicated what they were learning from data-gathering activities in both written and oral formats. The facilitator took primary responsibility for summarizing the results of particular data-gathering activities for other members to consider.

For the team's external audiences, the Curriculum Developer authored a program "Annual Report" which drew on the team's findings.

Phase IV: Deciding what happens next

Taking follow-up action

Based not only on the results of the evaluation but on the integrated planning and evaluation process in which the team had engaged all year, with the support of management, the team decided to:

(1) Expand the program to include native English speakers at the pre-GED and GED levels.
(2) Integrate a computer-assisted instructional program purchased from Josten's Learning Systems into the newly expanded program.
(3) Involve supervisors more intimately in the development of IEPs so that the IEPs better reflect the students' work-related needs, and the supervisors better understand the students' non- work-related goals.
(4) "Sell" the education program to supervisors and students as part of the company's strategy for organizational change -- a change which everyone understands is partly underway and whose pace will accelerate.

As mentioned earlier, although the Jostens system has been installed, enrollment in the program is very low. Intensely demanding production schedules have superceded the implementation of an expanded education program.

Evaluating the evaluation

Team members and the facilitator commented that there are two directions which the evaluation might have taken that would have strengthened it. These are:

• The team could have started its process of identifying goals by referencing the goals of the program as written in the grant proposal. While some of those goals were included in the revised goals list, it still took six months to complete the new list and begin to collect data. If the team had begun their work with the goals they had in hand, they could have still continued to refine goals and also begun to collect information.

• At the same time, some team members regretted having been too driven by the outcomes of the grant proposal -- outcomes that are more-realistically addressed in the third -- not the first -- year of a program.

• Earlier data collection would have been useful. The evaluation facilitator could have directed the goal-setting process more firmly and guided earlier data collection. Earlier data collection would have given team members an immediate feel for how formative evaluation can assist program development -- something that they could have built on during the year.

• It would have been useful to have deeper discussions early on about the differences between assessment and evaluation, and about what team members wanted to learn from an evaluation. In retrospect, team members had different expectations about what they wanted an evaluation to demonstrate about their program. For example, the Training Director was clear about wanting evidence of improvement in reading, writing, and speaking against a base-line measure. The two teachers in the program were unconcerned with base-line measures and felt that student self reports and teachers' observations were adequate methods for documenting progress.

The goal-setting process only partially elucidated these differences. But these differences would nonetheless surface in the ways that teachers, other education staff and managers discussed evaluation goals and projected activities. The evaluation would have been stronger if those differences had been explored more fully early in the evaluation process, and proactively rather than reactively.

• Team members agreed that the presence of an evaluation facilitator probably kept a firmer focus on evaluation activities than had they worked entirely on their own. However, team members (especially the Director of Training) were confident that the team would have evaluated on their own. After this pilot year, they are confident that they have some evaluation processes in place on which they can build.

IV. REFLECTIONS

Facilitator Laura Sperazi"s comments:

• Overall, team-based evaluation worked well in this company. Bull employees are accustomed to working in teams so the evaluation team format was familiar. At the same time, their familiarity with teamwork required the facilitator to sit back and let the team govern the process in a way that was more synonymous with their culture and language than was her prepared outline of evaluation activities.

• The facilitator conducted more of the actual evaluation work than anticipated. Doing the work justified her presence on the team and also allowed her to model some "evaluation behaviors" that some team members learned from.

• This team would have conducted some type of evaluation without the facilitator. The Program Coordinator is very knowledgeable about evaluation and would have required that some evaluation activities be carried out. The company culture also values (even demands) evidence of effectiveness of training programs. The Training Director would have required that some evaluation activities be carried out. Without the facilitator, this team would have been a good audience for a Guide on team-based evaluation of workplace basic skills programs.

• Waiting to collect data until the goals were completely defined made the activity seem more momentous than it should be. Early data collection helps the team to be unattached to the data. Some of it might be good; some not so good. Waiting until all conditions are (relatively) "perfect" or complete puts more pressure on the data-collection process than is necessary.

• It is important to note that several times during the course of the evaluation, and again at the last meeting where some members of the evaluation team gave the facilitator feedback, the following perspective on developing and evaluating a new workplace basic skills program was articulated:

> It takes the experience of developing and attempting to evaluate a program over the course of a year to know what it is that the program might accomplish and how it might best be evaluated. While there is a lot of pressure on the program to know what it can accomplish at the beginning, in reality, in this new field of workplace education which has no set curricula and established evaluation tools, it takes a full cycle of course development and evaluation to work out clear goals and evaluable indicators and to design appropriate evaluation procedures.

Therefore, the "failure" to produce a complete evaluation system at the start of a new program is really not a failure. It is a function of the state of the art of program development. Spending the better part of the year openly learning what the program can do and how it might be evaluated best may well ensure the subsequent success of the program. Similarly, holding up the start of a program until all base-line measures -- and all other programmatic bells and whistles -- are in place may be not only unrealistic but also not in the best interest of the students or the company.

DATATEC INDUSTRIES, INC.

Fairfield, New Jersey

A Case Study Prepared by Paul Jurmo

I. PROGRAM BACKGROUND

Program history

Datatec Industries, Inc. is a rapidly-growing manufacturer of components for computerized equipment, with eight plants around the U.S. (Their products include computer boards for the laser scanners used at Toys R Us and other major retailers.) At the main plant in Fairfield, New Jersey in late 1990, the human resources director had concluded that many of the primarily-Hispanic assembly workers could benefit from an ESL course. The director investigated several language institutes and had potential participants interview instructor candidates.

Language Training Institute (LTI), based in nearby Englewood Cliffs, was hired, and classes were begun with fifteen learners. These learners were divided into three groups according to language ability. Instruction was "competency-based," focusing on language needs identified by the company and participants.

Program goals

To keep up with the rapidly-growing demand for its products, the company had in recent years instituted a quality program emphasizing high quality work by all employees. The ESL program was seen as a way of enabling immigrant production workers to participate fully in that quality program. They would thereby improve productivity, decrease error, use more-complex equipment, and communicate and solve problems in teams. The focus of the classes has varied periodically according to learner needs. These include oral skills, writing, spelling, public speaking, expression of opinion, fast listening, and grammatical accuracy. The instructor consciously integrated assertiveness and team-building exercises with language instruction. Presentations made by learners at company events served as markers of learner progress.

II. BACKGROUND ON THE TEAM

History of the team

In its first two years, the Datatec program was coordinated primarily by LTI director Joy Noren in consultation with Larry Tourjee, the vice president of manufacturing. In early 1993 Joy and Larry agreed to have the program serve as a site for Paul Jurmo's research. At that point, the following planning team was put in place:

Stakeholders represented on the team

Josefa Aboleda: Assembler, program participant
Lucia Izquierdo: Assembler, production team leader, and program participant
Paul Jurmo: outside facilitator
Joy Noren: education consultant, program coordinator
Patti Scharf: Purchasing agent
Larry Tourjee: Vice president of manufacturing

Larry and Joy selected these members based on the following criteria:

Patti Scharf: Selected because of her demonstrated interest in the program from its inception and because of her willingness to mentor learners. Also has regular contact with many of the Spanish-speaking employees on a day-to-day basis.

Josefa Aboleda and Lucia Izquierdo: Selected because (1) their language proficiency level would allow them to participate in team meetings, (2) they both express their opinions and ideas openly, and (3) they interact with a wide range of production employees, especially the ESL program participants.

III. THE PROCESS WHICH THE TEAM WENT THROUGH

Phase I: Initial preparations

To familiarize himself with the program -- and vice versa -- the facilitator, Paul Jurmo, first talked with coordinator Joy Noren by phone. She explained the history of the program, focusing in particular on what she needed and had in terms of assessment and planning mechanisms. (While the company set broad goals, the learners "filled in the blanks" in program objectives by bringing in problems and interests from their daily work. She wanted to find a way to get more input from higher- and supervisory-level management in setting course objectives.)

She also explained the company context, particularly the company's shift toward a "quality team" format.

Based on that input, the facilitator submitted a proposal to Joy and Larry. It outlined the history of the NIFL research project and what it might produce for the program stakeholders. It also described roles which stakeholders might play on the planning team.

Larry responded enthusiastically to the proposal, and he, Joy, and Paul met to discuss the proposal in more depth. Paul also observed a class session and talked briefly with the learners. He then was led by one of the more advanced learners on a tour of the production area where most of the learners worked.

Based on the information gathered in the above activities, the facilitator wrote an abridged version of his proposal (called an "action plan") which Joy Noren circulated among key management personnel at the company. She and Larry identified the above-identified (See "Background on the Planning and Evaluation Team") team members.

Paul met with Joy to review the background of each team member and the roles they would play in the project. Joy noted that, until now, the union had not been involved in the education program and would therefore likely not be involved in the evaluation project.

She noted that learners understand the company's reasons for setting up the program: enabling them to understand new equipment and to become more involved in their work teams. Many had an interest in improving those job-related abilities. Many also were motivated for personal reasons, such as using English with their children.

She said that, although the company wants clearer communication, more "unity" between American and non-American employees, error reduction, and improved production, more work is necessary to analyze the specific tasks which learners need to perform to meet those larger goals. She hoped to establish clearer communication with management representatives, so that she can be more clear about what management needs. To date she has relied primarily on input from learners, trying to gear the curriculum to both the company's broad goals and learners' personal goals. She felt that it is difficult,, given the limited time for the course, to respond to a broad mix of company and learner goals.

Joy hoped that the evaluation process would clarify for her how to set goals and to measure them in a way which would demonstrate tangible results to those who need to support the program.

She until now has set goals for short, 8-week blocks, changing them depending on what's going on in the company at any time. For example, "teamwork" was a focal point for some time, and her classes read and talked a lot about it. She has not put the resulting learning activities together in a systematic curriculum.

To measure results, she builds in "competency markers." These include a task which learners role play; periodic checklists in which learners assess progress toward mastery of various competencies; or mini-quizzes on topics requested by learners or Larry (in one such quiz, learners spelled words taken from the workplace). While such assessment tools produce useful data on learner progress, she feels that they need to be better organized.

In late March and early April, Paul interviewed Patty Scharf, Josefa Aboleda, and Lucia Izquierdo, the remaining three members of the planning team. They discussed the purposes of the program, their roles at the company, what the program has accomplished so far, and things blocking learners' participation. These interviews thereby enabled Paul to better understand the program, while allowing him and team members to get to know each other and better understand their respective roles in the evaluation.

Phase II: Planning the evaluation

Clarifying program goals and the information to look for

In the first meeting on April 7th, Paul led the team through a 90-minute discussion of three questions:

1. What do we mean by the term "evaluation"?
2. Who will be the audiences for this evaluation?
3. What types of information do our audiences want?

Paul recorded members' answers on flipcharts, and later typed up minutes summarizing what the team stated. At the end of the meeting, it was agreed that Patty, Josefa, and Lucia would talk with representatives from the primary audiences to ask them:

1. In our evaluation report, what kind of information about the ESL program should we include? Why do they want that information?
2. What do they think the ESL program's goals should be?

On April 21st, the team met for the second time, for nearly two hours. Paul again served as discussion leader, leading the team through the following questions:

1. What types of information do our audiences want?
2. For what purpose do they want that information?
3. What should be the goals of the ESL program?
4. For the highest-priority goals,what would be evidence of success/progress?

To answer question #1, Patty, Josefa, and Lucia explained that they had conducted interviews with eight co-workers (including the company president) in the past few weeks. These sources had identified questions which they hoped the evaluation would answer for them.

To answer question #2, the team brainstormed a number of ways the audiences might use the information. These included: determining return-on-investment; and deciding whether and at what level to continue the program, how to improve communication within the production area, how to improve the education program, and how to motivate learners.

To answer question #3, Paul first summarized what the team members had previously told him (in Phase I) they considered to be the program's goals. This was a lengthy list, divided into major categories of "English on the job" and "English off the job." Each category, in turn had sub-categories containing specific tasks (e.g., participating in team meetings, identifying problems, asking for help, reading notices, etc.). He asked team members to review this list, revise it as necessary, and identify which goals were of particular importance.

At this point, the discussion became bogged down. This was due to a number of factors including (1) some team members were not familiar with the language and concepts being used in the meetings, and (2) a large number of complex tasks were being presented in a short time. Discussion got stuck on particular details (e.g., meanings and phrasing of particular terms). The discussion -- and the team's energy -- ground to a near halt.

Joy Noren then introduced another, more concise list of "competencies" which she had been organizing the program around. It was agreed that this list was similar to Paul's list and -- for clarity's sake -- might be a better list to consider as the program's goals.

To try to rejuvenate the discussion, Paul moved on to the last question of "For the highest priority goals, what would be evidence of success/progress?" However, the team had said that all of the goals or competencies discussed so far were important. As time ran out at the end of the meeting, it was agreed that team members would on their own brainstorm a list of possible indicators (evidence) of progress toward goals which they feel are particularly important.

On May 5th, the team met to identify "indicators" for the goals which the team had listed on April 21st. Team members had tried to come up with questions to ask related to those goals, and in this meeting they shared what they had come up with.

Unfortunately, the discussion rapidly became bogged down. Members weren't clear exactly what they were being asked to do. They focused on details of wording of a small number of indicators and never got to other ones.

One team member suggested that, rather than develop indicators in isolation from the instruments they were to be used in, the team should focus on developing one sample instrument. Time ran out before anything tangible was accomplished, and team members left the room frustrated and confused.

At this point the facilitator felt he was in danger of "losing" the team. He concluded that the team had gotten off to a good start, but that in the last two meetings members had become bogged down in details of a complex, unfamiliar, and abstract task. In consultation with the coordinator, he decided to leap ahead a few steps and do some "detail work" which, he hoped, would break this log-jam.

Designing a strategy for gathering data

On May 12th, the facilitator shifted the discussion to deciding what data-gathering activities the team might use. He hoped that this would give the team something more clear and concrete to focus on.

He presented a list of possible data-gathering activities developed by the coordinator. He then revised that list to include the following possible activities:

Gathering information from learners:

- Interviews with learners
- Oral simulations (tests)
- Written simulations (tests)
- Grammar mini-quizzes
- Mini-quizzes on workplace vocabulary
- Observation of learners using particular skills in the workplace
- Leadership projects (in which learners use particular skills to achieve goals set by learners, teacher, and supervisors)

Gathering information from co-workers and supervisors:

- Interviews conducted pre- and post, to identify needs, learner abilities, and steps to help achieve goals.

The facilitator suggested that, to keep the process moving, he and the coordinator develop several of the above activities and present them to the team at the next meeting. The team agreed.

Desiging data-gathering instruments

In the next two weeks, the facilitator and coordinator divided up this task. The coordinator put together most of the above activities for gathering information from learners. She planned to organize the resulting data in individual portfolios for each learner. Results of those activities could then be summarized and presented to management. The facilitator, meanwhile, designed interview guides for interviews to be conducted with learners and co-workers. He also developed an "interest inventory" in which learners would identify topics which they would like to focus on in the classes.

At a meeting on June 2nd, the team reviewed the draft instruments designed by the coordinator and facilitator. It was agreed that the coordinator would try out her instruments in the coming month, while the facilitator would interview learners. A third team member, Patty Scharf, was to interview several co-workers.

The team also set some guidelines for the interviews. These included confidentiality, sensitivity, and limiting interviews to 15-20 minutes each.

Phase III: Gathering, organizing, analyzing, and reporting the information

Gathering and organizing the data

During the next three weeks, the agreed-upon interviews were conducted with learners and co-workers, and in-class assessment activities were carried out. Those conducting these activities recorded the results in draft form.

Analyzing the data

On June 30th, the team met to review the data gathered in the above activities. When the member who interviewed co-workers reported her findings, her data indicated that the three co-workers were generally skeptical about the program and the seriousness of many of the participants.

This finding came as a blow to other team members, who questioned not only the validity of those co-workers' observations but the tone in which they were conveyed. The team was also told that a higher-level manager was not pleased with the direction which the evaluation had taken. He said that he had expected the evaluation to generate quantifiable evidence of learner competencies and not get off into feedback from co-workers and questions related to how to improve the program.

This negative feedback from supervisors about the program and from the higher-level manager about the evaluation was a shock to the coordinator and facilitator. It was agreed that the evaluation had not produced clear evidence of learner progress. Instead, a lot of attention was being given to negative comments of a small number of co-workers who in some cases had little direct knowledge of what was going on in the classes. It was agreed that the feedback from co-workers led to a number of other questions:

- Were learners actually learning anything in the classroom?
- If they were developing competencies, why weren't co-workers observing the learners using those competencies on the job? Were they simply not paying attention? Or were learners not in fact using them?
- If learners were developing competencies in the classroom but not using them on the job, what was preventing them from doing so?
- What can be done to help the coordinator be sure that the program focuses on job tasks which the company holds as important?
- What are effective ways of documenting what learners are actually learning and then showing that evidence to co-workers and others in the company?

Given the mood and confusion created by the feedback from co-workers and from the higher-level manager, the team did not go much further in interpreting the data. It instead agreed that, in order to show higher management what the team has been doing, the facilitator would now take the information gathered in the learner and co-worker interviews and summarize it for interpretation by the team at a later meeting.

The facilitator then spent a good part of a day at the word processor, preparing a preliminary summary of the data gathered in the interviews with six learners and three co-workers. This summary was broken down into three sections:

1. What we hoped to learn: The six key questions which the evaluation set out to answer:

    1. In what ways do Datatec employees have a problem communicating in English? How do these problems impact the employees and the company?

    2. What should the English program be trying to accomplish?

    3. What in fact is being achieved by the program? Are Datatec employees now better able to communicate in English?

    4. What factors are contributing to the program's success? What factors are inhibiting progress?

    5. Should the program continue?

    6. If the program continues, what steps need to be taken -- and by whom -- to help achieve the program's goals?

2. How we gathered information: A summary of the various data-gathering activities used: interviews with learners and co-workers, formal and informal testing, the facilitator's earlier interviews with team members, and the facilitator's tour of the worksite and review of documents.

3. A summary of the information gathered: This section was organized around the six key questions listed under "What we hoped to learn" above. For each question, the pertinent data gathered from the various sources were summarized. At the end of each set of data, the question "What is your response to the above information?" was presented, followed by lines where the reader could jot comments.

The facilitator sent copies of this 8-page summary to each team member with a memo asking each team member to review the summary before the next team meeting. Members had one week to look over the data and jot down any comments or questions provoked by the data.

The facilitator and coordinator were sensitive that, at the last team meeting, they had received negative feedback about the pace and direction of the evaluation. Both the facilitator and coordinator had after that meeting sent notes to upper management to respond to those concerns. The coordinator and facilitator also met to review the preliminary summary and agree on the agenda for the next meeting. They agreed that the meeting needed to be well run and produce clear results.

At that next meeting, on August 11th, the hoped-for results did occur. The facilitator and coordinator co-facilitated the meeting and led the other members through a systematic analysis of each section of the data.

As members responded to the data, their comments were recorded on flipcharts. It was agreed that the facilitator would now incorporate their comments and the original data into a draft of a final report. This meeting ended on a higher note than some of those which more immediately preceded it. Members felt they had actually generated some useful information and been able to learn something from it.

When writing up the team's analysis into a draft report, the facilitator realized that he had additional interpretations of his own. He however wanted to avoid mixing his interpretations in with the other team members', in order to preserve the integrity of what the team members had said. His solution was to add another category for each section of the data titled "Outside facilitator's interpretations and recommendations."

In the summary, then, the data were organized according to the six key questions which the evaluation had set out to answer. Following each set of data were two sets of interpretations: those of the on-site team and those of the outside facilitator.

The facilitator circulated this draft of the final report to the team to review prior to the next meeting, held on September 22nd. Just prior to that meeting, the facilitator conducted three additional interviews of co-workers. The team had asked him to do so because they wanted to clarify whether all co-workers felt so negatively about the project as did the first three who were interviewed. In the three additional interviews, the facilitator found a good deal of support for the program and for the learners.

At the team meeting which followed, the team reviewed the contents of the draft report. Members agreed with the contents of the report and asked that the facilitator also prepare an executive summary. That summary was to emphasize concrete actions which might be taken -- and which had already been taken -- in response to the evaluation process. The team felt that the upper-level managers who constituted the primary audience for the report would be particularly interested in evidence of how the program was continually improving itself.

The facilitator was pleased to see that, in this September 22nd meeting, the team had suddenly taken control of the process. The discussion flowed smoothly and naturally, with a positive, action-oriented tone. In meetings up to that point, the facilitator had stood at the helm, directing the content and flow of discussions. In this meeting, team members didn't look to him for guidance but instead spoke freely and pointedly about how to pull together a final report and what directions the team wanted to follow next.

Preparing a strategy for reporting the findings

Thus, in the September 22nd meeting, it was agreed that the facilitator would add an executive summary to the report which emphasized concrete, positive actions the team had been taking to improve the program based on evidence gathered in the evaluation. In other words, the executive summary was to avoid dwelling unnecessarily on negative comments, but instead emphasize positive action.

To help the facilitator prepare this action-oriented executive summary, the coordinator provided various memos and other documents showing examples of the actions she had been taking in recent months to improve the program. The facilitator incorporated those examples with other recommendations which the team had come up with in the analysis process.

He faxed the resulting report to team members for additional feedback. By October 20th, the final version of the report was in the mail to the team members.

At the September 22nd meeting, in addition to making final decisions about what went into the final report, the team decided what it would do with the report when it was done. The team decided to prepare a summary of the key findings for the company newsletter. It was also agreed that copies of the report would be submitted to the upper-level managers who were to have been the primary audience.

Team members also agreed that, as the report was prepared, evaluation teams need to take special care to maintain confidentiality and sensitivity to the feelings of individuals affected by the evaluation. For example, if an informant is critical of someone else's performance, such criticism needs to be handled with sensitivity, to avoid embarrassing anyone involved or creating unnecessary conflict or hard feelings.

Reporting the findings

Key findings from the report were summarized in an article in the company newsletter. This summary emphasized the progress learners had made and its impact on the production area.

The report was also submitted to the plant managers who constituted the primary audience for the evaluation. At this writing, however, it is not known what response the managers had to the report.

<u>Phase IV</u>: Deciding what happens next

Taking follow-up action

As one result of the evaluation, the coordinator began developing ways of involving co-workers more actively in the program. For example, co-workers were invited to observe classes, and one agreed to do so. Team members also prepared a formal invitation for co-workers at all company sites to become language mentors to class participants and thereby involve themselves in direct, useful ways on an ongoing basis.

Within a month a newly-reinvigorated mentorship program was in place. Co-workers at not just the New Jersey plant but in other company facilities around the country have agreed to communicate with learners by phone and in writing. At the New Jersey plant, co-workers who signed up as mentors agreed to meet periodically with learners. A list of volunteers was circulated to learners, and learners chose whom they wanted to work with by "signing up." Learners then took the initiative to contact their mentors to get started. Mentors will be "circulated" every two months, to help co-workers and learners to get to know each other better and break down traditional barriers between learners and co-workers.

The team itself might be going through a transition. One supervisor has shown an interest in joining the team (which members renamed the education "action team.") The coordinator has suggested various ways of getting more employees involved in the team, including rotating members or holding open sessions which anyone can attend.

In her communications with supervisors and upper management, the coordinator felt that they had a general sense of progress about the class. She also talked individually with the upper manager on the team about how to link the program more directly with "teamwork" initiatives. This was an issue uncovered in the evaluation. One teamwork activity will be a "bilingual teamwork day" with special activities aimed at building communication between language groups.

Evaluating the evaluation

After the final report had been submitted to the team, the facilitator asked team members whether they might give feedback -- either in a team meeting or in writing -- on the evaluation process itself.

Feedback from coordinator: In writing, the coordinator gave the following feedback:

1. "The team concept with stakeholders from all dimensions of the company is a sound one. Unfortunately, the team frequently bogged down in negativity and confusion which I think could be avoided to a large degree in the future by:

   • "Brief, practical tasks designed for information gathering (e.g., using simple charts where things could be listed or filled in, short lists of direct questions. A lot can be accomplished in a short time if the task is very focused.

   • "Brief explanation of tasks with a minimum of academic language to allow 'easy entry.'

• "Balance of time early on in the process between gathering feedback from stakeholders and planning for change in response to feedback. (Practical results of the team's time need to be evident sooner.)

• "Spend time up-front with some team-building exercises to assure that the lines of communication are as honest as possible and to build trust in the group.

• "Invite co-workers to attend an open team meeting so they can better understand what the team is about and how it could benefit them."

2. "My original hopes for the project (. . . and what I actually achieved):

• "(Hoped for) better communication with stakeholders at Datatec. (Achieved) some progress in improving communication.

• "(Hoped for) assistance from evaluation consultants in developing better assessment tools and attitude inventories which would strengthen the program. (Achieved) not what I had anticipated.

• "(Hoped for) some national/state attention for Language Training Institute. (Achieved) nothing as yet.

• "(Hoped for) a knowledge of the team process as it applies to workplace education. (Achieved) I learned a lot through our difficulties as well as through the positives.

3. "What I liked and didn't like:

Liked:

• A chance to reflect on the program with others.
• A team model based on representation of all stakeholders.
• Constructive feedback and suggestions which contributed toward the improvement of the program.
• Documentation of our project.

Didn't like:

• The nature of activities in the meeting rarely motivated people to attend meetings and generally did not spark full participation or positive energy.
• The team never formed a true team.
• The project did not adequately compensate Datatec employees or the education consultant for time required on the project outside of work or class time.
• The data-gathering process appeared to be abstract and so lengthy that the credibility of the team effort became an issue among Datatec management. I felt responsible because I had introduced the project to Datatec.

• Negative destructive criticism was counter-productive. (Negative constructive criticism was useful.)

Feedback from Purchasing Agent:

• "Although, in recent months, upper management has a greater recognition of the ESL program's progress, I do not feel that it is largely due to the evaluation. Again, I don't feel there is a great deal of quantitative information in the report to give managers this impression. Instead I feel that it is due to the ESL students taking on a much more active co-worker role in the company. This may be due to the Mentor Program, which was a result of our study. Also, recently production employees have volunteered for more extra-curricular activities, and may be a result of more confidence in speaking English.

• "Honestly, I feel the study did not accomplish its original goal, which I understood was to identify marked improvement in the students' performance as a result of their new-found English skills. However, it did give a starting point to identify progress in the future. By marking their current levels of English proficiency, we will better be able to identify their progress in the future. Joy and I also meet regularly to brainstorm on new ideas to keep the program more interesting and providing short term goals for the classes to reach.

• "Another thing I felt to be misrepresented in the evaluation was the role of the facilitator. I felt that your role was more of an observer, who gave little direction in meetings and should accept more responsibility for discussions becoming bogged down. One of the roles of facilitator is to keep meetings moving smoothly and discussions from getting off track.

• "I did distribute our report back in the fall and, unfortunately, received no response from managers or co-workers. I don't feel discouraged, though. It has been an extremely busy year, and I am confident that the report was reviewed.

• "Again, I feel that the outcome of the committee's charter was positive. Joy has developed several quantitative measurement systems, the Mentor Program is going exceptionally well, Larry is more confident in the level of proficiency of most participants, and it has really opened doors of communication between Joy and other Datatec employees to receive feedback and suggestions for the program's goals."

Other team members gave similar indirect feedback through the coordinator. Some apparently were confused by the technical, "academic" nature of the process. Some also were confused and turned off when they didn't see any tangible results for their efforts. (For example, meetings would end in confusion; there would be time lags between meetings; it was not clear what response the intended audience had to the team's final report.)

IV. REFLECTIONS

Paul Jurmo's comments:

• The team members' analyses of the team process (See "Evaluation the evaluation" above) were essentially on target. The tasks given the team too often did become bogged down in confusion, leading to decreased team member interest.

It might be noted, however, that essentially the same activities were used in other sites, with more-positive results. Why the difference between the Datatec site and other sites?

Time

In my view, a key difference at Datatec was the relatively small size of the company and education program. The small numbers of people involved meant that only a small number of people could serve on the team. Team members in turn had limited time they could spare away from their jobs, making it difficult to set aside enough time to consider all the questions being presented by the facilitator.

In other sites there were more people to spread the work around. At Datatec, there were only a few people and they could spare only a limited amount of time for a project brought in from the outside.

Motivation

The evaluation team concept at Datatec was an idea brought in by an outsider. In other sites, stakeholders had already formed some kind of collaborative planning structure and come to the conclusion that some kind of evaluation was needed. The Datatec program was probably to a certain degree getting into evaluation as a courtesy to the outside facilitator. When the process became bogged down, team members naturally questioned whether it was worth continuing if the reward for the effort was to go primarily to an outsider being paid for this project rather than to team members themselves.

It also appeared that some team members were looking primarily for quantitative evidence of positive program impact while the facilitator was hoping to provide an opportunity for team members to develop their own summative and formative data and a system for continually collecting and using such data. In other words, those team members had a different expectation for the evaluation than did the facilitator.

Infrastructure

The Datatec team was pulled together to work on this research project. It was not something which already existed, and team members did not have a team identity and a history of working together as a decision-making unit. Extra time was probably needed to create and nurture such a team infrastructure, but -- as noted above -- that time didn't exist. The facilitator tried to get on with getting the group to perform tasks which they weren't fully prepared for. This contributed to confusion and miscommunication.

The facilitator didn't realize that the Datatec team faced these limitations. He instead tried to forge ahead, to test his model. He didn't understand the causes of the confusion which resulted and didn't know how to handle that confusion. If he had, he might have done the things which the coordinator and purchasing agent suggested: clearer explanation of tasks, simplification of tasks, extra team-building activities, keeping meetings moving and discussions from getting off track, and so forth.

Despite these bumps in the road, the process did produce the positive results cited by the coordinator and purchasing agent under "Evaluating the evaluation" above. The outcomes which team members seemed to value were: clearer measures of learner abilities; improved communication between the coordinator and other company employees; greater involvement of other employees in the program (e.g., as mentors, shapers of curriculum, etc.); an increased willingness of learners to take on more-active roles in the company; and an overall greater interest by company employees to pay attention to the program, monitor its progress, and help it to work. These are potential positive outcomes which other evaluation teams might aim for.

Other teams, however, should carefully assess team members' time, skills, and interest level before embarking on an evaluation. Teams should also be clear what the facilitator's and other team member's roles will be. More specifically, in a traditional "outside" evaluation, most of the responsibility for designing instruments, collecting information, and analyzing it is in the hands of the outside evaluator. In a team evaluation, the facilitator helps teams make decisions about what information they want, develop their own instruments, gather data, and analyze the data. Teams need to be clear who plays what role in the evaluation process, given the time, skills, and interest level of all team members.

Teams can then agree on tasks which each team member can play. These tasks should be do-able, feasible, and meaningful for those involved. Members need to feel success -- a sense that they personally and the team as a whole are accomplishing something useful -- or they will get discouraged.

Teams also need a mechanism for dealing with confusion, frustrations, or conflicts which arise, so that they don't undermine the team's efforts. For example, if a team member agrees to design an instrument and doesn't do so, or if a facilitator tries to accomplish too much in an hour-long meeting, team members should have the trust and opportunity to resolve those problems promptly -- in the spirit of constructive criticism and continuous improvement.

THE HAARTZ CORPORATION

Acton, Massachusetts

A Case Study Prepared by Laura Sperazi

I. PROGRAM BACKGROUND

Program history

The Haartz Corporation is a small (250 employees) manufacturer of custom, vinyl-coated, commercial upholstery fabrics. These fabrics are purchased by manufacturers of cars and boats and installed in vehicles that are sold worldwide. Like most small businesses, Haartz has been trying to keep production costs down while it improves product quality. The reliable quality of its products and its ability to respond quickly to custom orders keep this energetic company at the center of its industry.

A few years ago, the President of the company and other managers began to see the need to provide basic education support to some workers. The changes in production technology and organization of work that were contributing to the company's success in the marketplace were also highlighting another reality: a significant number of workers could not master the new production technologies and work structures because their basic English language and math skills needed improvement. The new work structures which highlighted the need for workers to improve their skills include: working in teams, emphasizing creative problem solving at each phase of work, creating flexible job roles, implementing statistical process control measures, and becoming generally oriented to quality management.

The Haartz Corporation is an unusual company. It is small, family-owned, profitable, and managed by a young man in his late thirties whose father and uncles ran the business before him. This young President and other managers like him have succeeded in making team management, collective problem solving, and flexibility more than slogans. Employees are motivated to learn and to change because they are invested in the success of the business of which they feel themselves to be a valued part. While there are acknowledged problems with the quality of work some employees can produce because of their limited skills, the general attitude toward employees is not condescending but supportive. The cultural message in this organization is that education will help employees in their own lives and it will help the business -- in whose profits the employees share.

Program goals

The team enjoyed the luxury of a six-month planning period before conducting classes. During this time the team worked hard to understand exactly what their basic skills program should achieve. The Program Coordinator was familiar with the SCANS

Report and other reports like it which suggest that American business needs to reorganize itself by, in part, training workers to become more flexible and multi-skilled. As a result, the team began to align the goals and practices of the basic skills program with the mission statement of the company -- and actually rewrote that company mission statement in response to the new thinking which the basic skills program provoked.

When the evaluation facilitator joined the team, she encouraged team members to further review the program's goals from the perspectives of the workers, the company, and the program itself, and to pay attention to the similarities and differences among those goals. The charts on pages 9-13 document several iterations of program goals and indicators which the team produced.

Description of Program

With assistance from a grant through the Massachusetts Workplace Education Initiative and the National Workplace Literacy Program, the Haartz Corporation offered language arts and math instruction to about 50 employees over an 18-month period from July 1992 to December 1993. After the initial planning period of six months, classes were offered in twelve-week cycles. Two math and two language arts classes -- all an hour and a half in duration -- were offered in each cycle and scheduled morning, midday, late afternoon, and night so that employees from all shifts could attend. Employees received full release time from work to attend classes. Employees were enrolled in only one course at a time.

The Haartz Corporation's educational partner in basic skills education is the Acton Public Schools/Acton-Boxborough Regional School District. Since January 1994 the company has been supporting the basic skills program with its own fund.

In addition to providing basic skills education, the Haartz Corporation also provided GED instruction to twelve employees during the second half of the grant period. These services were not directly tied to the grant but grew out of an increasing recognition of a need for them as the math and language arts classes became more popular. The company soon made a special arrangement with Mt. Wachusett Community College and the Commonwealth of Massachusetts GED Program Office to become an official GED test site. This made it possible for the twelve candidates for the GED to take the test in their own company. This was a strong symbol of the workplace becoming a learning place.

II. BACKGROUND ON THE TEAM

History of the team

As required by the Massachusetts Workplace Education Initiative (MWEI), the Program Coordinator convened a Planning and Evaluation Team composed of representative stakeholders in the summer of 1992. The MWEI required all its 1992-93 funded programs to convene such teams and to follow a planning and evaluation process virtually identical to the process being piloted in this National Institute for Literacy (NIFL) project.

The reason for this overlap is that the evaluation model being piloted under this NIFL project grew out of work done in Massachusetts. The MWEI pursued its work in team-based evaluation on a parallel path to the work being done for NIFL. Rather than present a conflict, this convergence of interests created an opportunity for the evaluation facilitator to conduct her work in a program already required to conduct evaluation activities with a team. The facilitator was able to provide guidance in evaluation to the Haartz team (in addition to the support it received through its participation in the MWEI) for about nine months, and to document the work for the purposes of this case study.

Stakeholders represented on the team

The Haartz Planning and Evaluation Team included:

- Eric Haartz, President, the Haartz Corporation
- Doug Seibert, Plant Manager
- Fred Carley, Quality Control Specialist, On-site Coordinator
- Mike Krupski, Supervisor
- Nelson Purdue, Supervisor
- George Pickles, Employee
- Rodney Goguen, Employee
- Russel Tysinger, Employee who replaced George Pickles and Rodney Goguen
- Arthur Goodall, Program Coordinator, the Acton Public Schools/Acton-Boxborough Regional School District.
- Jane Goodall, English Instructor, the Acton Public Schools/Acton-Boxborough Regional School District.
- Ken Russell, Math Instructor and Haartz Extern

Note that not all members of the team attended each meeting. The "core team" (especially toward the end of the evaluation period) was composed of Fred Carley, Art Goodall, Jane Goodall, Ken Russell, and Russel Tysinger. Eric Haartz attended more than half of the meetings.

III. THE PROCESS WHICH THE TEAM WENT THROUGH

Summary: Between December 15, 1992 and August 30, 1993 the facilitator met with the Haartz team approximately twice per month for a total of 16 meetings. Each meeting ran for about two hours. Team members often discussed other business before getting down to the work of the evaluation. This helped the evaluator to become "situated" in the program and to get to know key team members in their program-related roles. In addition, the facilitator communicated frequently with team members by phone -- especially the Program Coordinator and the On-site Coordinator-- and met and talked with team members at several conferences on workplace education.

After clarifying its program goals, the team chose to focus its evaluation on whether the basic skills program was improving the communication skills of workers enrolled in the program. It did so after long and interesting discussions about the relative merits of focusing an evaluation on formative versus summative questions.

After deciding that it would focus on the improved communication skills of enrolled employees, the team spent several meetings identifying the varied indicators of improved communication skills at the Haartz Corporation. It planned to evaluate improved communication skills through several measures:

- a pre-post survey administered to students
- a student focus group
- a supervisor focus group
- a program log
- informal feedback from the Haartz community

Other goals were also evaluated through these and other measures, as indicated in the Goals Matrix on pages 27-28.

Phase 1: Preparing the team

Initial preparations

As mentioned, the Haartz Corporation workplace education program was part of the Massachusetts Workplace Education Initiative (MWEI). MWEI staff prepared its member programs for team-based evaluation through a three-hour orientation. When Laura Sperazi joined the Haartz team as evaluation facilitator, members were ready to work, although they were somewhat wary about the amount of time that a team-based evaluation might take. The Haartz Corporation had also made several trainings in teamwork available to supervisors early in the grant period. Supervisors on the team had participated in this training. Overall, the Haartz Planning and Evaluation Team was well-prepared to work as a team.

Organizing the evaluation team

The evaluation facilitator did not have to organize the team. It was in place when she began her work with the company. It had been convened according to MWEI guidelines which required the representation of all stakeholders. However, the evaluation facilitator encouraged the participation of additional workers who were enrolled in the program.

Phase II: Planning the evaluation

It took roughly three months for the team to plan its evaluation. During that time it reviewed its goals and discussed the relative merits of focusing on formative versus summative questions.

Haartz is a quality-oriented company. It is committed to producing the best-quality products possible. The company follows the general quality directive (promoted by Edward Deming) that, as long as manufacturing processes are operating within quality range, there is no great need to focus excessively on the quality of your outcomes. In other words, quality outcomes are inherent in quality processes. Quality processes guarantee quality products. Because this orientation to creating a quality product works for manufacturing at Haartz, it made sense that the team would examine its education program -- its educational product, if you will -- in the same way.

The question thus facing the team was: Does the team have to concern itself with measuring outcomes? Or, if members were clear about the outcomes they wanted to achieve, could they focus simply on their "processes," on making a better and better program? This leaning toward an exclusively process-oriented evaluation was reinforced by the amount of anecdotal summative information about students' achievements that circulated throughout the organization. There was a sense that everyone, including supervisors, knew enough about what the program was achieving. They wanted to maximize the achievements by concentrating on making a better and better program.

The team came very close to dismissing formal summative evaluation activities. In the end, however, some more-traditional pressure to demonstrate what the program was accomplishing won out. This happened in part because the company would be required to demonstrate more frequently to its customers exactly what its quality management and other training programs were achieving.

The team received additional evaluation support from three sources:

First, selected team members met with members of two other evaluation teams (from Bull Worldwide Information Systems' Brighton Plant and the Norton Company in Worcester, Massachusetts) to share ideas about how to focus an evaluation of a workplace education program.

Second, anticipating the need to present the results of their evaluation in statistical form, selected members participated in a day-long training on the use of the Statistical Package for the Social Sciences (SPSS), a database program.

Third, the team received technical assistance on survey design from Donald Cichon of Donald Cichon Associates. The team wanted the survey to present simple and easy-to-read graphic representation of items. The team settled on a format that is more graphic than most surveys.

Clarifying program goals and the information to look for

Over the course of approximately four meetings, the team discussed and refined its overall goals, chose one goal to evaluate (improved communication skills), and specified about twenty indicators of that goal. The facilitator led the team activities in these meetings by (1) suggesting that goals be articulated from the perspectives of different stakeholders; (2) clarifying the differences between goals and indicators; and (3) providing the team with ample opportunity to brainstorm and discuss possible goals and indicators.

As mentioned, the team had been working on its goals for some time; their work with the facilitator built on that foundation.

It is also important to clarify that the team did not hesitate to hold students in the math class acountable to the goal of improved communication skills, in the same way that students that in the language arts class would be. Although the content of one course was math, the team fully expected -- and the instructor was confident -- that the math students should be evaluated on their communication skills. Focus group results confirmed the communication skills which students learned in the math class. (See below, pages 17-22.)

The following charts present the goals for the Haartz program and the indicators of improved communication skills. Although somewhat lengthy taken as a whole, the charts render an interesting picture of the sometimes circuitous process which a team must go through in order to identify meaningful and representative goals and accurate indicators.

(Please note that in Chart #2 and Chart #3 "indicators" sometimes are actual indicators and sometimes are possible "measures" of the stated goal. Chart #4 lists only indicators for the goal "improved communication skills.")

Chart #2: Haartz Corporation Basic Skills Program Goals and Indicators by Program/Employee/Organization: First Iteration

Program Goals	Indicators of Goal Attainment
I. Viewing student as "Customer," we want to offer them a high quality product.	Student satisfaction with course and self-performance. "Customer" desire to continue using product.
II. Use "SCANS" competencies and foundation skills to create curriculum tailored to needs.	
III. Allow for personal growth and development of employees by enhancing ability to perform and build confidence.	Demonstrated ability and desire to improve job status.
IV. Make life-long learners of students.	Student desire to continue education, in-house and/or outside.
V. Provide feedback to DOE Office of ABE in terms of start-up procedures and curriculum building.	Complete instructor notes and lesson plans along with comments and recommendations.
VI. Build program based on student input (classroom feedback and talk on shop floor).	Student satisfaction that course is tailored to needs and capability. Student sense of accomplishment.
Use experience gained from Phase I of program to make this program effective and efficient.	

Student/Employee Goals	Indicators of Goal Attainment
I. Improve self-confidence of students to make better employees.	Mid-course and post-course critiques. Supervisor evaluation.
II. Improve communications.	More active involvement in discussion. and presenting ideas. Supervisor evaluation.
III. Additional goals as communicated by students to instructors.	Mid-course and post-course critique. Problems brought to class as being of interest to students.
IV. Student satisfaction.	Mid-course and post-course critiques. Improved performance. Students spreading word of how helpful course is.

Chart #2: Haartz Corporation Basic Skills Program Goals and Indicators by Program/Worker/Organization: First Iteration (cont'd)

Organization Goals	Indicators of Goal Attainment
I. Increase skill level of students.	Direct measure of performance in subject being taught Subjective measure of daily perform-ance by supervisor. Performance evaluation interview. End-of-course critique.
II. Improve communications, includ- ing with supervisors.	Direct measure of performance in class. Subjective measure of daily perform-ance by supervisor. Performance evaluation interview. End-of-course critique.
III. Improve productivity.	Supervisor evaluation.
IV. Improve self-confidence.	Student self-evaluation. Supervisor evaluation. End-of-course critique.
V. Improve problem-solving skills with students to encourage their coming forward with solutions.	Student self-evaluation. End-of-course critique. Supervisor evaluation.
VI. Vertical/Horizontal team-building and problem solving.	Supervisor evaluation.
VII. Use program as stepping stone to establish GED attainment program.	GED attainment statistics. Percent of employees with H/S diploma or GED.
VIII. Establish within the culture of Haartz Corp. a dynamically evolving philosophy of life-long learning.	Employee response to continuing program with more diversified subjects. Employee interest in continuing education outside workplace.

Chart #3: <u>Haartz Corporation Workplace Education Goals and Indicators: Final Iteration</u>

Program Goals	Indicators of Goal Attainment
• Viewing student as "customer," we want to offer them a high product	• Student satisfaction with course and self-performance • "Customer" desire to continue using product

Organization Goals	Indicators of Goal Attainment
• To improve problem-solving and communication skills with students to encourage their coming forward with solution	• Student self-evaluation • End of course critique • Supervisor evaluation • Increase in constructive suggestions
• To support and enhance Vertical/ Horizontal team concept	• Supervisor evaluation • Team performance improvement • Enhancement of team concept
• To establish within the culture of Haartz Corporation a dynamically evolving philosophy of life-long learning and to create a bridge to other programs such as GED	• Employee response to continuing program with more diversified subjects • Employee interest in continuing education outside workplace

Chart #4: Indicators of Improved Communication

1. Speaks up in meetings.
2. Says what is really on his/her mind in meetings.
3. Uses technical words when s/he needs to.
4. Makes suggestions about how to improve how work is done
5. Asks his/her supervisors questions when s/he needs to.
6. Asks the people s/he works with questions when s/he needs to.
7. Talks to his/her supervisors with confidence.
8. Lets supervisors know that s/he has important skills which s/he is ready to use.
9. His/her supervisors understand him/her when s/he talks to them.
10. The people s/he works with understand him/her when s/he talks to them.
11. Talks with his/her supervisors about ideas that improve quality.
12. Talks with people s/he works with about ideas that improve quality, such as better instructions for Standard Operating Procedures.
13. His/her supervisors let him/her know s/he has good ideas.
14. The people he/she works with let him/her know he/she has good ideas.
15. Reads job instructions.
16. Reads safety procedures.
17. Reads bulletin boards.
18. Works well with other people on the floor.
19. Offers help to his/her supervisors.
20. Offers help to people s/he works with.
21. Teaches new workers about how the workplace runs.

22. Uses the information on the floor (i.e. computer printouts, memos, etc.) to improve how s/he does his/her work.

Note: See Goals Matrix on pages 27-28 for summary of goals and evaluation results.

Phase III: Gathering, organizing, analyzing, and reporting the information

Gathering and organizing the data

The evaluation facilitator worked with the team to gather and organize its information, using the following activities:

• **Pre-Post Student Survey.** With input from the team, the evaluation facilitator developed a draft pre/post survey to collect information on improved communication skills. The team revised the instrument. Then the evaluator drafted a new version. This process was repeated four times before the survey was put into final form.

The survey has twenty-six items; four are demographic and the rest are indicators of improved communication. Each item offers the student a choice of one of five answers (i.e., not at all; sometimes; a lot; always; does not apply) with corresponding bar-graph-type representations. At the end of each item, the student is invited to comment in writing on the question asked/answer given. The evaluation facilitator also drafted a version of this survey for use with students who had not taken the survey as a pretest. This version asked students to assess each item twice -- once for before they began the program and again for after the program. (See Appendices A and B.)

The Program Coordinator piloted the survey with two students for content validity and reliability. (See Appendix C.) Teachers administered the survey in class. The evaluation facilitator reviewed and organized the raw data.

• **Focus Group.** The evaluation facilitator and the Program Coordinator developed questions for the focus group for workers who were participants in the program, and then conducted the focus group together. The evaluation facilitator wrote up the results of the focus group. (See Appendix D.)

• **"Math Midcourse Critique."** The math instructor developed and administered the "Math Midcourse Critique." This written feedback sheet is composed of eight multiple-choice questions which assess how well the students feel the course is going for them: speed of the course; clarity of instruction; quality of the materials, usefulness of what is being taught, etc. There is space for comments at the bottom of the survey.

The math instructor administered the "critique" in class in order to gather feedback from students about what they liked and did not like in class. It was intended to be an anonymous, quick, and easy check on "customer satisfaction" whose results could be tallied without having to analyze narrative answers to many open-ended questions. (See Appendix E.)

• **The Program Log.** The evaluation facilitator provided guidelines to the On-site Coordinator about how to keep a program log that would provide documentation -- become a compendium
-- of the rich, oral, anecdotal information about the program that flowed freely throughout the organization. The On-site Coordinator was responsible for implementing the program log.

A program log is a book or folder where ideas and stories about a workplace education program can be recorded, preserved, and then reviewed. The log is the journal of the program, kept collectively by students in the program, workers who are not students in the program, teachers, supervisors, managers, administrators -- anyone who cares enough to think about the program and have an idea worth putting down on paper. The purpose of keeping such a log is to preserve valuable information that might otherwise get lost. The log is a continuous improvement tool. It is the record of the program's "production." After you review the production record, you are better informed to make decisions about how to improve operations.

A team member (usually but not necessarily a teacher) is responsible for reviewing the log, taking the log to team meetings, and reporting interesting findings to other team members. Every few months the "keeper of the log" writes a brief summary of what has been recorded in the log, and this report, in turn, becomes part of the log. Program staff, team members, and others should be able to review a year's activity fairly easily this way, once the system gets going.

• **Supervisor Focus Group.** The team generally agreed that a supervisor focus group would be an important complement to the worker focus group. However, there was also concern about taking supervisors away from work for an hour, especially when some of the supervisors were already freely sharing their opinions about the program either in team meetings, in their own meetings, or in conversation with each other and other managers. The team did not convene this group during the time the facilitator worked with it.

• **Newsletter Articles.** The team considered regular articles or updates written about the basic skills program for the Haartz Corporation's monthly newsletter to be part of the evaluation documentation process because the articles required students -- with the support of teachers -- to think through the most important issues to communicate about their program. These "updates" keep everyone in the company informed about the program -- who is in it, what is changing, why others should join. Even in a company as enlightened as Haartz, this publicity legitimates the program and helps to diminish the stigma attached to (as a worker in the focus group said) "having to go to school now because you're a dummy." Participants in the worker focus group considered these newsletter updates very valuable. They are written by students in the program as part of a class activity.

• **The Process Evaluation.** Following a chart which lists seventeen components of a quality workplace education program and "quality indicators" for each of those components, members of the Planning and Evaluation Team attempted to set quality standards for each component of the Haartz program. (This chart of "quality indicators" was prepared by the Massachusetts Workplace Education Initiative and was based, in part, on the facilitator's early work with evaluation teams.) The team determined whether the component they were evaluating maintained a quality standard or needed to be improved. If improvement was needed, the team then identified the actions it needed to take to make that improvement. The team met with the facilitator for two meetings to complete this part of the evaluation process. (See Appendix F.)

Analyzing the data

Once the above data-gathering activities were implemented, the team analyzed the resulting information, as follows:

• **Pre-Post Survey.** For all the work that the team put into designing the pre-post communications skills survey, in its first round of use (in the second cycle of classes), it did not yield valid results. This is because students did not evaluate their communication skills objectively at the start of the class for fear of "looking bad." Although the math teacher had doubts that the pre-test data were accurate -- he suspected that the men especially were inflating their self-assessments of their communication skills because they did not want to "look bad" -- it was not until after the post-test that some of the students (and the data) confirmed his suspicions.

Many students rated their communication skills at the start of the program very high. At the end of the program they rated their skills more realistically and many overall scores showed a loss instead of an anticipated gain. The lower scores can be viewed positively as a more-honest assessment of students' communication skills rather than as a failure to achieve gain. That honest assessment means that something valuable took place both in the education process and in the evaluation process. It means that (1) students felt free to discuss the motivations of their earlier asssessments, thereby demonstraing their improved communication skills; and (2) the survey instrument registered the discrepancy between anticipated and actual results in a way that promoted critical self-reflection by all parties.

Related to survey results is the use of the database "Statistical Package for the Social Sciences" (SPSS). As mentioned earlier, training in SPSS had been provided to the team. The facilitator and team members expected that the math instructor -- who had a lot of experience with computers and statistical analysis in his prior career -- would learn SPSS and subject survey results to statistical analysis with relative ease. The math instructor had agreed to this mid-way through the evaluation process. However, a scarcity of available personal computers in the company, lingering questions about whether the small number of surveys warranted such analysis, invalid results on the first round of data collection, and the additional training the instructor needed on new personal computer systems, hampered use of SPSS.

The teachers and the students themselves knew that a great deal of learning had taken place during the second cycle of classes. The challenge was to find a format in which students could describe that change fully. The worker focus group was that format.

• **Worker Focus Group.** The purpose of the worker focus group was to elicit students' ideas and feelings about (1) what they had learned from participating in the program, with a special focus on communication skills; and (2) how the program might be improved. The group elicited very useful information about what students learned; how they learned; what they want to continue to learn; and how their learning affected how they do their jobs.

Focus group participants wholeheartedly enjoyed taking both the math and language arts classes. They especially talked about how being treated like an adult in the classroom encouraged them to become confident about learning. They specifically identified the teaching method that uses multiple strategies to solve problems as helpful to them. Through the support and ingenuity of their instructors, participants have realized that "there's more than one way to learn" and have become more familiar and comfortable with their own learning styles.

Focus group participants talked about the benefits of learning together. In class, participants become friends, and friends work together on the floor more easily and efficiently than people who are simply "coworkers." Focus group participants strongly suggested that Haartz employees who are not enrolled in the workplace education program -- foremen and supervisors as well as workers -- would benefit from exposure to the team-based learning strategies of the classroom. These include: listening well; taking people's suggestions seriously; paying attention to alternate solutions to problems; not pulling rank if someone has a hard time learning something, but being patient and supportive.

All focus group participants wanted to continue their classes. They generally agreed on the following actions which the program might take to improve itself and to become better integrated into the life of the Haartz organization:

-- Continue the workplace education program.

-- Organize a few open houses and invite foremen and supervisors to them. Do not invite foremen and supervisors into regular classes whenever they want. This would disrupt the classes.

-- Hold more-frequent focus groups -- every three months, at least, to allow for input on how the program is developing. Get all program participants involved in the focus groups -- not just a selected group.

-- Supervisors should sit in on classes from time to time to get an update on what's going on, and to offer their opinions on the class. This could be in addition to the open houses.

-- Supervisors should also have a focus group like the one held with program participants. They should have an opportunity to say what they think and learn more about the program.

-- Re-institute the suggestion box.

This focus group provided the most detailed and insightful information of the evaluation. Further results are detailed here:

Were classes enjoyable?

Focus group participants agreed that classes were very enjoyable because they were offered on an "adult-to-adult basis." Group participants defined adult-to-adult in several ways: (1) teachers employ multiple strategies to solve problems; (2) teachers use humor or stories to allay nervousness or tension participants might feel about not being able to learn something quickly; and (3) teachers never "pull rank" and make you feel bad for not knowing something.

Several participants described how ineffective former teachers in traditional school settings had been because they were unable to approach problems from multiple perspectives or take the learning styles of the students into account. Participants' comments about why they found classes so enjoyable provide insight into why and how adult education differs from what we consider traditional classroom teaching -- and why and how it succeeds when traditional methods fail. According to participants, traditional teachers are unimaginative and don't listen to their students.

There was general agreement that making a course outline available to students was very important. It seemed to give participants a sense of control over their learning. The teacher trusted them enough to give them a plan. He didn't just spring something new on them each time the class met. A sense of having new material imposed on you, when you were unready and lacking confidence, seemed to characterize most participants' prior school experience.

Did classes help you at work? If yes, how?

Participants said that class helped them with specific tasks like cutting yardage, preparing formulas, and measuring weights. They specifically noted help with conversion to metrics and knowing what numbers mean as opposed to performing meaningless functions -- on a calculator, for example. Learning became a game -- a literal one where participants would bring a problem they had encountered at work to class to try to stump the teacher. Eventually everyone would try to solve the problem. This fostered a team approach to learning and working that the participants appreciated deeply. In fact, this team approach helped participants so much that it reportedly created a difference in work-related social skills between class participants and others. Class participants know how to listen, and ask and answer questions better than non-participants.

According to focus group participants, employees who are not enrolled in the class -- supervisors and foremen as well as other workers -- would benefit from the kind of training they received. Focus group participants were very clear that learning with others in a supportive environment creates relationships which make working with each other much more pleasant and efficient. This is the result of feeling that you are dealing with a friend -- someone whose best interest you have in mind -- and not simply with a co-worker, someone who's there just to get the work done.

One participant gave an example of how a supervisor criticized something the participant said to him as "nagging" or intrusive. The participant answered that it was part of his job to make suggestions about how to do things better. The participant suggested that if the supervisor had been in the class with him -- if the supervisor had had the benefit of learning in an environment where offering suggestions is welcome -- he would have heard the suggestion differently: not negatively but positively. This participant said that now (since enrolling in class) he is more concerned about quality. "My name is on that ticket. And my profit."

Do you want others to enroll in class?

Participants agreed that other workers would benefit from enrolling in the workplace education program. They talked about what might prevent others from enrolling -- even when others know they need the help and want to enroll. Focus group participants said that some people are afraid to enroll because it makes public the fact that they need to continue their education. They said that some workers make it hard for others to acknowledge that they need educational support by ridiculing them -- calling the class 'kindergarten." Focus group participants said that there are still some foremen who do not understand or support the program, making it difficult for workers to choose to go to class instead of staying at work. Focus group participants also suggested that top-level management needs to "get the word out" about the program. Management needs to publicly support enrollment as well as advertise the availability of classes through bulletin boards and through foremen's meetings and notes.

Has participation in class improved your communication skills?

Focus group participants agreed that participation in classes has resulted in improved communication skills. They specified results like not being afraid to talk; improved vocabulary (especially technical words); improved understanding of what someone else is saying; and improved ability to ask others to clarify what they are saying.

Related question: Do classes help the company?

Focus group participants agreed that participating in the class helps the company. Not only do participants improve specific communication skills like the ones described above, but participants feel more friendly toward their co-workers. This changes the way they perform their work together.

What would you like the program to offer next?

Participants were very clear they are ready for the following:

-- higher math
-- more GED instruction
-- college courses.

Are work-related materials useful?

Focus group participants agreed that it is good to use work-related materials in class, in both the math and language arts classes. The benefits include: learning your own job better; learning another job; and having an opportunity to practice your own or a new job more than you would be able to otherwise.

Are there any problems with the classes?

Focus group participants identified only one problem with the classes: having people at three different levels in one class. Participants were very generous with their comments about what it means to be in a class where people are at very different starting points, but they did say that it is a problem. Sometimes having three different levels of students holds people back who are ready to move on. Sometimes it makes people feel bad about holding other people back. It means that the class is often geared toward the middle.

Finally, the focus group participants made it perfectly clear that their communication skills improved significantly as a result of participating in the math class, not just the language arts class. This was the result of the math instructor's highly interactive, problem-solving approach to teaching. Students had no choice but to make their interests and questions known.

• **Math Midcourse Critique.** Students liked the math midcourse critique. It gave them a chance to tell the math instructor anonymously what they thought of the class, and helped to build investment in the course as something that belonged to them.

Eleven students completed the critique in the middle of the first cycle of classes. The instructor felt that responses were honest. For each question, responses tended to cluster in the middle range of choices with one or two responses at either extreme: (1) students were generally satisfied with the course; (2) the course was moving at just about the right pace, but two students felt left behind; (3) the instructor explained things clearly, but two students said they were not sure they understood everything; (4) the material was challenging, and four students said it was very challenging; (5) what students are learning is very useful; (6) no one said that they would not recommend the course to fellow employees; and (7) all but one said that s/he would take another course if it were offered.

The math midcourse critique helped the instructor to adapt his pace of instruction. It was a good tool for a quick, midcourse "check-in" with students.

• **Program Log.** The program log was a good-enough idea that did not implement well.

There was a need to document the rich anecdotal information about the program which circulated throughout the organization. Following the advice of the evaluation facilitator, the On-site Coordinator designated a special notebook as the program log and made it available to everyone in the class. He placed it on his desk -- normally a busy place where people gather to talk -- with the hope that students and others would write down their ideas and feelings about the program.

Virtually no one used the log. No one used it because its purpose was not clear, and students (and others) were not being regularly encouraged in class and elsewhere to use it as a means for improving the program. This is not a criticism of the teachers or other staff. It does point out that the purpose for a collective journal needs to be continuously clarified by all staff and that staff need to model its uses and results. Without this, it becomes either intimidating or meaningless.

Staff are figuring out how to best document the anecdotal information about the program that they do not want to lose. Using computers at work stations was being explored as an option.

• **Process Evaluation.** These are the seventeen components of a quality program which the team reviewed, and the actions team members needed to take to bring the component into "quality range."

Component #1: Articulate Philosophy of Program.
No action

Component #2: Develop and Implement Outreach and Recruitment Plan.
Action:

- More people want to enroll than the program can accommodate. There is a limit to the number of people who can be away from the machines at one time. The team needs to make a decision about the level of instruction the program should provide and who the program should target. Agreed: Target the program to people with the lowest skills and bring everyone up to basic mastery. Keep the schedule on shift, and then consider advanced classes. If the company becomes "more prosperous" it might be possible to get temps to cover during class time, but this is "easier said than done."

Component #3: Provide Orientation
The team agreed that the students are the "best ambassadors" but actions might include:

- Eric talks to supervisors about the program.
- Send message through electronic mail to sign up for GED and other messages about the program, too.
- Put announcement about the GED program and the basic skills program in the newsletter.

Component #4: Establish Intake Procedures
No action

Component #5: Design and Implement Initial Assessment Activities
Action:

- Think about the assessment procedures that need to be in place for the next cycle. Does the education staff want to develop Individual Education Plans

(IEPs) for each student? How can initial assessments and IEPs become part of a portfolio assessment? (Keep in mind that the program is respectful of people's fears of testing, and assessments shouldn't scare people away.)

Component #6: Develop Curriculum

Actions:

- Move toward developing a more contextualized curriculum.
- Remove some slang from the glossary and move toward more-generic English.
- Document the curriculum. In Cycle 3, instructors should keep a "diary" of strategies they use in each class.

Component #7: Select Appropriate Learning Arrangements

Action:

- Do not group more than three levels of students in one class.
- Possible volunteer support to help teachers manage the range of skills students have.

Component #8: Develop On-going Assessment Procedures

Action:

- Devise a way to document ongoing student progress -- not just document at the beginning and the end of a course.
- Revisit this issue in September and possibly invite Kate Camarra to provide technical assistance on developing a portfolio assessment system. Pursue portfolio assessment whether Kate is available or not.

Component #9: Ensure Support Services

No action

Component #10: Staffing

Action:

Staffing is relative to how the program develops. Decisions need to be made about what the program should/could look like after federal funding ceases in December. For example:

- Should the program serve a new population?
- Should the program serve the current population at a new level?
- Should computer literacy become part of the program?

September is not too soon to think about December. The team suggested that it draw up a plan-plus-cost for a continuation program

Component #11: Staff Training and Development

Action:

- Staff should access more of the training available through the Bureau of Adult Education

Component #12: Program Planning, Evaluation, Monitoring and Management

Actions:

- Rename the "Language Arts" class. "Communication Skills" is a possible alternative.
- Program policy is that if students sign up, effort should be made to come to class. Teachers might publish course outlines so that students can see what they're committing themselves to.
- Add more students to the Planning and Evaluation Team. Add someone who is not a student so s/he can understand what program is about, and so that the team gets his/her perspective.
- Start a "Program Log" -- a big book or binder where everyone associated with the program and the company can write a word or more about what they feel/think about the program. (See memo to Fred about the "Program Log.")

Component #13: Tracking and Reporting

No Action:

Component #14: Fiscal Management

No action (but questions about fiscal management are relative to how the program continues).

Component #15: Facilities

No action (although it is noted that the program is not handicapped accessible.)

Component #16: Follow-up/Exit

No action

Component #17: The Business Education Partnership

No action

The Goals Evaluation Matrix

The following Goals Evaluation Matrix presents the program goals along with the data-collection procedures used to collect information related to those goals. On the basis of the information collected from the sources just described, an assessment is made about whether the goals were achieved or not and, if they were achieved, to what extent were they achieved. An asterisk indicates that the assessment needs some explanation. The explanation is provided at the end of the Matrix.

Haartz Corporation Workplace Education Program
Goals Evaluation Matrix

• = This goal was evaluated
A = This goal was achieved, as indicated by the related measure
AP = This goal was achieved partially, as indicated by the related measure
NA = This goal was not achieved
* = See notes at end of Matrix

INSTRUMENTS/PROCEDURES FOR DOCUMENTING AND MEASURING GOALS

GOALS						
1. Viewing the student as "customer," we want to offer them a high quality product		**• A**	**• A**	**• A**	**• A**	**• A**
2. To improve problem-solving and communication skills with students to encourage their coming forward with solutions	**•AP***	**• A**			**• A**	**• A**
3. To support and enhance Vertical/ Horizontal team concept * **1**		**• A**			**• A**	
4 To establish within the culture of the Haartz Corporation a dynamically evolving philosophy of life-long learning and to create a bridge to other programs such as GED * **2**		**• A**			**• A**	**• A**

Notes on the Matrix

* The pre-post survey did not document the kinds of gains in communication skills that were anticipated. As described, this was the result of student attitudes about being assessed on such a survey. Although the data were compromised, they still indicate that some communication skills were gained, if only through the process of making explicit with the instructors what the problems with the baseline data were.

* The team did not discuss this goal explicitly very much as the grant year progressed, but it is fundamental to the changes that the company is trying to implement. Workers in the focus group did not use the language of vertical/horizontal teams but they did, in fact, reference improved teamwork throughout their discussion.

* The most obvious indicator of the achievement of this goal is the expansion of the basic skills program to include an on-site GED program from which eight of twelve students received their GEDs after one course of instruction.

Preparing a strategy for reporting the findings

Strategies for reporting evaluation results were targeted to specific audiences. There were several audiences for this evaluation.
The team had identified these audiences early in the evaluation process, while still identifying goals and indicators.

(1) The first audience was the members of the Planning and Evaluation Team itself. They were the first to receive reports from the evaluation facilitator and others about the results of any data-gathering activity. These reports were usually oral, and were later written in memo or report form. This audience included the company President.

(2) The second audience was other managers and employees in the company. They learned about the evaluation results throughout the year by word-of-mouth and reading articles or updates about the program in the Haartz Corporation newsletter.

(3) The third audience was other programs in the Massachusetts Workplace Education Initiative. The Program Coordinator, On-site Coordinator, and Evaluation Facilitator attended several meetings and conferences where they discussed the progress of the evaluation.

(4) The fourth audience was the program's two sponsoring government agencies: the U.S. Department of Education and the Massachusetts Department of Education. The Program Coordinator completed a final report of the evaluation for these two audiences, a product which has value for the other audiences, as well.

Phase IV: Deciding what happens next

Taking follow-up action

The team continuously took follow-up action and improved its program throughout the grant year, based both on what it was learning through the process of planning its data-gathering activities and on the actual products of subsequent data collection and analysis.

The team learned many things that are the result of discussion and analysis of problems prior to the formal collection of data. For example, discussions about indicators of communication skills led to an understanding among team members that some supervisors did not support the program sufficiently, most likely due to lack of information and discussion about it. The On-site Coordinator decided to lead a discussion about the program at a supervisors' meeting.

The actual collection of data -- from the math midcourse critique, to the communication skills survey, focus group, and the process evaluation -- also informed actions that the team took or might take to improve its program that have been discussed elsewhere in this case study.

Now that the program is being run with company money, the team continues to meet and oversee planning and evaluation activities. Participants in the employee focus group suggested that focus groups be held every three months so that there is a regular forum for collective discussion about the program. They also suggested that supervisors meet in focus groups to discuss the program. Presumably, the team is considering these options.

Evaluating the evaluation

• Overall, the team was pleased with the evaluation process and results -- defining results broadly as the totality of what the team learned.

• The Program Coordinator had been concerned that evaluation activities were taking too much time. (He was especially concerned about taking up too much supervisor and worker time in evaluation activities. This may have contributed to the delay of the supervisors' focus group.) However, at the end of the period in which the facilitator met regularly with the Haartz team, the Program Coordinator said that he understood the benefits of the process.

• A survey was not the evaluation instrument most suited to the Haartz Corporation culture. However, the exercise of designing the survey, collecting the data, and analyzing it was invaluable. It was a good "exercise" for the team, providing a platform from which it can evolve more meaningful data-collection techniques.

• With hindsight, the team could have made a more concerted effort to complete the work which had been agreed on -- mastering SPSS and conducting a supervisor focus group. The facilitator could have urged the team more strongly to complete its work.

IV. REFLECTIONS

Facilitator Laura Sperazi's comments:

• This evaluation was made easy by having a team already in place when the facilitator began her work. Team members represented all the stakeholders and they conceived of themselves as a team that could -- and should -- work for the benefit of the basic skills program.

• The process evaluation sessions worked very well. They worked so well that we should have spent more time working out the actions that needed to be taken to improve quality services, and then documenting those actions and their results. We could have taken better advantage of the On-site Coordinator's knowledge of SPC processes and integrated them into the process evaluation of the basic skills program. We could have made the purpose, function, and operation of SPC processes and the process evaluation of the basic skills program more explicitly parallel.

• The facilitator could have pressed the team to master SPSS and conduct a supervisor focus group -- work that was part of the loosely-defined contract between the team and the facilitator. But pressing these parts of the evaluation would have been awkward. The team worked very hard and did as much as it felt able to do. At the end, they were open to continuing evaluation activities on their own. If the facilitator had made the evaluation unpleasant by pressing for more work, the team may not have been so open to continuing on their own.

• The evaluation plan could have better accessed the Haartz Corporation's "oral" culture and informal information streams about the basic skills program. At Haartz, information about all aspects of work flows freely in conversation, and traditional ways of collecting information -- like surveys -- can seem lifeless by comparison. (For example, the President of the company walks the floor each day and engages workers in informal conversation about how they and their families are doing.) The facilitator could have encouraged the team to think more creatively about alternative ways to collect information that would have accessed the company's oral culture.

The worker focus group did access this source of information. It was an exciting event that helped to move the program forward. The program log had the potential to do the same. Presumably, the log will work better on computer than it did in "hard copy."

THE NORTON COMPANY

Worcester, Massachusetts

A Case Study Prepared by Laura Sperazi

I. PROGRAM BACKGROUND

Program history

The Norton Company, founded in 1885, is a world-wide manufacturer of grinding wheels, diamond cutting products, and sand paper. It sells its products primarily to industrial customers. The Companie St. Gobain, a large French corporation which began producing glass in the seventeenth century and now produces insulation, pipes, silicon wafers, and other such products, bought out the Norton Company in September of 1990. The buy-out prompted some of the organizational changes which the Norton Company is still undergoing -- changes which include a new emphasis on quality, on-time production, and team-based management.

The Norton Company employs almost 16,000 people world-wide. The Bonded Abrasives Division, for which the original Norton Company job-related math skills course was designed, manufactures grinding wheels and employs about 1,200 people in Worcester, Massachusetts. An explicit goal of the Norton Basic Skills Program is to facilitate the organizational changes that are intended to enhance the company's competitiveness.

However, there is a bias against organizational change "buzz words" in this culturally conservative company. Managers do not loosely use "TQM" or "continuous improvement" or other fashionable phrases the way other companies might because, according to one manager, "there is so much diversity in what those phrases mean." Manager of Human Resources struggle deeply with defining clearly the essential changes in the organization of work that are needed to support their new business strategy. They struggle to define and provide the support which employees need to perform in accordance with those changes. And members of the Norton Basic Skills Committee[4]

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[4] The Norton Company Bonded Abrasives Basic Skills Committee is virtually synymous with a Planning and Evaluation Team. The Basic Skills Committee is composed of representatives from all the stakeholder groups, including program participants. The Basic Skills Committee oversees the planning and operation of the basic skills program and was involved in the early and middle phases of conducting the evaluation. In practice, a few members of the Basic Skills Committee have taken responsibility for carrying out the last phase of work for the evaluation. Throughout this case study, Basic Skills Committee and evaluation team are used interchangeably.

struggle to define the appropriate goals and measures for their Basic Skills Program so that there will be symmetry among the goals of the business, the goals of the training program, and the goals of the evaluation.

The "bottom line" of change at the Norton Company is that "there is some reorganization of work and an associated transfer of power and decision making to more people." As one Manager of Human Resources said: "We have to re-engineer the way we do business. Human potential needs to be developed individually and collectively. Without a re-engineered human component, any other process will not succeed." The company -- and the training department in particular -- need to move workers to "where the work is." Bonded abrasives is a "very fickle" business; the work changes rapidly. Therefore, the company needs to move employees in the direction of the demand for work without having the pace of change frighten -- and perhaps incapacitate -- them. .

Program goals and components

The introduction of organizational changes and related computerized technologies clarified the need to provide math instruction to some employees. Within a couple of years of providing math instruction (which began in 1990), the need for additional instruction in language arts, blueprint reading, and measurement was clarified. The opportunity to conduct a formal evaluation of the Basic Skills Program further clarified the need to define measurable goals and indicators for the program. (See "Clarifying program goals and the information to look for," below.)

As of November 1993 a total of ten classes were offered over three shift periods. The classes included: three math; three language; two computer-enhanced blueprint reading; one introduction to measurement; and one machine maintenance class taught by an employee on the Basic Skills Committee. (Teaching the class was this employee's idea and grew out of his participation on the Basic Skills Committee)

The company provides 50% release time to all Basic Skills Program participants. About one hundred thirty students have completed a course of instruction in the program. There are about 100 participants enrolled in the current course offerings. (This includes participants who have completed other courses in the Basic Skills Program and are continuing to receive instruction.)

The Workplace Education Program within the Center for Life-Long Learning at Quinsigamond Community College in Worcester, Massachusetts is the learning provider for the Norton program.

II. BACKGROUND ON THE TEAM

History of the team

The team-based evaluation of the Norton Basic Skills Program began in late April 1992. At that time the Norton Basic Skills Committee had already been meeting regularly every two weeks for eight months. At that time, the Norton program was funded through the Massachusetts Workplace Education Initiative (MWEI), Cycle 5.

The presence of a committed Basic Skills Committee in the early stages of the Norton program was the result of two factors.

First, the Workplace Education Program Coordinator at the Center for Life-long Learning at Quinsigamond Community College had participated in the MWEI's evaluation of its fourth cycle of sponsored programs. This evaluation used evaluation teams to conduct their own evaluations for the first time in Massachusetts. The benefits of that experience encouraged her to replicate the team evaluation model in her new program from the beginning.

Second, the Manager of Human Resources was accustomed to working in teams and immediately saw the value of regular communication about the development and evaluation of the Basic Skills Program. The evaluation facilitator met with the Norton Basic Skills Committee (this is what the team called itself) first under the auspices of the MWEI -- from April through June -- and then under the auspices of the National Institute for Literacy research project --from December 1992 through March 1994.

The members of the Basic Skills Committee were ready and eager to address questions about the outcomes they could expect from their program. The team focused almost exclusively on organizational outcomes, and this focus was a function of three important factors:

(1) the need to understand the full dimension of the organizational changes the company was/is undergoing;

(2) the understanding that these organizational changes will be achieved largely through educating and retraining employees; and

(3) the intention to link organizational changes directly to the training and education programs which are intended to improve the skills of the workforce.

It is important to note, however, that despite the focus on organizational outcomes, the team supported the achievement of worker's personal goals through enrollment in the Basic Skills Program. Achieving personal goals would simply not be the focus of the evaluation.

Stakeholders represented on the team

Committee members included:

- Donna Holden , Administrative Coordinator, Training Department
- Bethany Brockmeyer, Educational Coordinator for the North American Abrasives Group
- Ray Bull, Training Coordinator
- Brian Eyles, Program Participant, Former Floor Operator (having suffered an injury at work, he now works in the administrative office)
- Brad Field, Systems and Sourced Product Manager for Superabrasives Division
- Jack Gagnon, Floor Operator, Program Participant
- Bert Galarza, Floor Operator, Program Participant
- Joseph Javorski, Manager of Human Resources, Precision Business
- James Litwinowich, Manager of Quality
- Joseph Passeri, On-site Program Coordinator and Instructor
- Kathy Rentsch, Workplace Education Program Coordinator, Center for Life-long Learning, Quinsigamond Community College
- Mark Stacey, Manager of Human Resources
- Cal Wilson, Departmental Supervisor

The composition of the Basic Skills Committee changed considerably during the fifteen months of the NIFL-sponsored evaluation. The people named above were all part of the group for a period of time. However, a core group of people have provided continuity in the committee for this period. These people include Bethany Brockmeyer, Joseph Javorski, and Joseph Passeri. Kathy Rentsch was a regular member of the team until May 1993 when she left her job as Workplace Education Program Coordinator at Quinsigamond Community College.

III. THE PROCESS WHICH THE TEAM WENT THROUGH

Summary: Between April and July 1992, the evaluation facilitator met with the Norton Basic Skills Committee three times. Between December 1992 and April 1994, the evaluation facilitator met with the Norton Basic Skills Committee eight times.

Four of the eight meetings were held on-site at the Norton Company with trainers for a computer data-base program called Statistical Package for the Social Sciences (SPSS). (Two of these meetings were day-long; two were half-day; all trainings were conducted for the Norton team exclusively.) Steven Andrews and Alice Oberfield Andrews conducted the SPSS training and were available for telephone consultation as needed.

One of the meetings was held with Donald Cichon, of Donald Cichon Consultants, who advised on technical aspects of survey development. Donald Cichon was also available by phone as needed. In addition to these eight meetings with the evaluation facilitator, Steven Andrews met once by himself with selected members of the Basic Skills Committee to advise on coding survey data.

The Basic Skills Committee also met with the facilitator, SPSS trainers, and the evaluation teams from Bull Worldwide Information Systems and the Haartz Corporation once in early February 1993 for an introduction to SPSS and an overview of activities of the three evaluation teams. This makes a total of thirteen meetings and trainings which the Norton team participated in.

During these meetings the team:

- clarified its goals for the evaluation.
- specified one primary indicator of success for its Basic Skills Program -- improved employee involvement in the organization.
- expanded the primary indicator to include involvement on particular jobs as well as in the organization as a whole.
- developed several formats for a survey focused on employee involvement in the organization and on the job.
- collected data from approximately 160 program participants, including maintenance data on approximately 30 participants.
- coded the data according to SPSS requirements.
- programmed the data.
- attempted to run the data for preliminary analysis.
- revised its evaluation plan.

Only the most preliminary analyses of the data had been run at the time of the formal conclusion of the evaluation. There are several interconnecting explanations for this. They include:

(1) Typing the coded data onto a computer was a more complicated task for a novice team to manage than either the team or the facilitator had imagined. It was more complicated because support staff to whom this task had been delegated had to learn a new data-entry format and because the data which the team had generated were voluminous. The SPSS format requires some study and it was time-consuming and tedious to type coded data for hundreds of variables and multiple versions of surveys onto a computer.

(2) Turnover in support staff further delayed the completion of this task. New support staff had many responsibilities other than finishing the computer work for what was probably perceived as a marginal project. This new person had no continuity with the evaluation and therefore no personal investment in completing it.

(3) A job change for one key member of the team resulted in his spending less time thinking about and working with the evaluation project.

(4) The SPSS consultants and evaluation facilitator were committed to the idea that team members should learn to run the SPSS program themselves, and it did not occur to them to contract out the input and analyses when it was probably appropriate to do so. The SPSS consultants could have completed the input and preliminary analyses themselves, and then advised the team on how to proceed on their own, with continued guidance as needed.

(5) Furthermore, as the length of time between data collection and analysis grew, a new perspective on how evaluation might be conducted in a more decentralized manner was put forth by a key member of the team. This cast doubt on whether this evaluation should be concluded according to the original plan.

Despite these drawbacks, work on the evaluation has been very valuable. Work on the evaluation has provided a continuous forum for key stakeholders to clarify what is important to know about what their program is achieving. One key member of the team, the Educational Coordinator for the North American Abrasives Group, has taken the initiative to lead the evaluation through the analysis stage. She is motivated to do so because she will be a resource in basic skills program development to as many as twelve to sixteen other Norton plants in the United States. She would like an effective evaluation model to share with others. The evaluation of the Basic Skills Program at Bonded Abrasives in Worcester gives her the opportunity to iron out snags in the model before replicating it. The key elements of the plan to continue the evaluation at Bonded Abrasives are described below in "Taking follow-up action."

Phase 1: Preparing the team

Initial preparations

As described above, the Norton Basic Skills Committee began meeting in September 1991 under the auspices of the Massachusetts Workplace Education Initiative. When the evaluation facilitator began to work with the team in April 1992, she did not have to persuade Basic Skills Committee members about the value of team-based evaluation. Committee members were quite open to considering evaluation activities as part of their work. The MWEI had prepared them for this. However, only a few members had any formal experience with evaluation. The facilitator introduced the purposes and methods of workplace education program evaluations and provided a forum in which questions related to evaluation could be addressed. The team's experience with the facilitator was positive enough that they accepted her offer of continued facilitation under the auspices of the National Institute for Literacy.

Organizing the evaluation team

Program staff took responsibility for organizing the evaluation team. See list of members, above.

Phase II: Planning the evaluation

Clarifying program goals and the information to look for

This section explains how the team decided to focus on "employee involvement" as the central indicator of success of its Basic Skills Program, and how new dimensions of that indicator evolved over time. It is useful to understand the process which the team went through to decide on this particular focus.

The team began by defining outcomes for the Basic Skills Program[5] in the broadest of organizational terms: "creating a flexible workforce." The team then specified some of the skills employees need in order to perform many jobs "flexibly." These new skills include math and measurement; communication; problem solving; and understanding how the business cycle works -- lead time, on-time delivery, etc.

The team got more specific about possible "quality outcomes" for the Basic Skills Program when it addressed the question of improvement of individual -- as opposed to team -- productivity. The team questioned whether it is possible to measure change in individual productivity based on participation in the Basic Skills Program. This was because work at Norton is conducted in teams, and that the organization will become only more team-oriented.

In an attempt to deal with this question of measuring individual employee productivity, the team identified "better recording on SPC" as a desired outcome of the job-related math program. Properly defined this would, in fact, be an effective measure of individual improvement in productivity. The evaluation team defined better recording on SPC in two ways:

(1) How quickly are employees identifying a process as out of control or tending to be out of control; and once the process is identified as out of control, how quickly can employees come to a solution for cause/variation?

(2) How effectively can employees investigate the source of the problem and rework what needs to be reworked?

At this point it became clear that better recording on SPC -- as well as all the other broad organizational outcomes which the team identified -- are not the desired outcomes of the Basic Skills Program alone, but rather of the whole education and training effort. Put another way, a job-related Basic Skills Program cannot shoulder the burden of bringing about broad-based organizational change, or of improved use of SPC.

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[5] When the evaluation was begun, the Basic Skills Program was called the Job-Related Math Program. Only math instruction was offered. It soon evolved into the Basic Skills Program where more than math instruction was offered. For the sake of clarity, throughout the rest of this case study we refer to the Basic Skills Program, unless it is appropriate to specify the Job-Related Math Program.

However, it does have a specific role to play alongside other education and training programs. That role is supporting the development of a culture of continuous product improvement through education and training, and of helping employees to 'bridge" effectively to other education and training programs within the company -- programs in which they could not participate unless they had the benefit of basic skills instruction. Indicators of the success of the Basic Skills Program should then include how well the program helps employees to bridge to other programs, and on how class instruction fosters an environment of continuous improvement through education.

By the end of the second team meeting with the evaluation facilitator, two important conceptual shifts occurred:

(1) The team understood that participatory instructional methods in the classroom promote the very skills that the company wants to teach all its employees: creative problem solving, taking initiative, collaborating with others, etc. This means that employees who are enrolled in a basic skills course have an advantage over others. They receive extra training in the new skills which the company is promoting. One team member put it this way: "Instead of seeing education separate from manufacturing, we now see the integration. Job-related basic skills can work exponentially to change the organization. The instructor in the classroom is like a group leader. There is no wall that separates one process from another."

(2) The team agreed to focus on "employee involvement" as the indicator of the success of their workplace Basic Skills Program. This desired outcome was the same outcome that other training efforts were trying to bring about. It was the outcome that seemed to capture the essence of the organizational change that the company was trying to bring about. At this time, the team defined employee involvement relative to the organization, not relative to job performance. Involvement in the organization might include -- among other things -- volunteering or being asked to take the lead role in a project; volunteering or being asked to make a presentation to supervisors; volunteering or being asked to lead a company tour; continuing education; and bidding for better jobs. (See Appendix A.[6])

The following list details the goals which the team pursued in its early meetings, ending with improved employee involvement.

• Flexibility of the workforce. Employees are learning new skills to perform more jobs. These new skills include:
-- math and measurement

[6] Appendix A is the final draft of the survey instrument which focuses on employee involvement. It contains the original questions which focus on involvement in the organization, but it also contains new questions which focus on involvement on the job. The following sections of the case study describe how the focus evolved from involvement in the organization to involvement on the job.

-- communication
-- problem solving
-- understanding how the business cycle works -- lead time, on-time delivery, etc.

- Transferability of skills from class to work.
- Bidding for better jobs
- Individual productivity improvement.
- Increase in employee self confidence.
- Retention.
- Decrease the number of rejects, "increase productivity" --
- Better recording on SPC.
  - -- How quickly are employees identifying a process as out of control or tending to be out of control; and once the process is identified as out of control, how quickly can employees come to a solution for cause/variation?
  - -- How effectively can employees investigate the source of the problem and rework what needs to be reworked?
- Employee involvement
  - -- take the lead role in a project
  - -- continuing education

By the third meeting, the team was further specifying the indicators of improved employee involvement in the organization, and drafting sample questions for a questionnaire which would be given to all participants in the Basic Skills Program. The team anticipated that the results of a questionnaire administered before and after enrollment would demonstrate improved employee involvement for most program participants. The team also considered identifying a control group so that the evaluation could attribute improved employee involvement to participation in the Basic Skills Program and not to other factors.

With documented improvements in employee involvement resulting from participation in the Basic Skills Program in hand, the training program leadership would be in a strong position to argue to company managers that this type of training moves the company toward achieving its desired organizational change. The team completed the first questionnaire and used it to guide pre-enrollment interviews with 100 participants in September 1992.

When the facilitator began to work with the team again in December 1992, about 60 additional questionnaires had been completed.

However, in the winter of 1992-3, some issues concerning the administration of the survey, the content focus of the evaluation, the use of a control group, and the overall amount of work that the evaluation was requiring began to surface. These issues surfaced and resurfaced throughout 1993 in the following ways.

- <u>Strengths and limitations of the interview format</u>

  The team had decided to gather the survey data in an interview between the program participant and the On-site Coordinator. These interviews took about an hour each. While the team felt committed to the quality of the information they were getting through this interaction, they also felt that the time being spent was excessive. One hundred interviews meant one hundred hours just gathering information. The time required to collect information sometimes led to information not being collected on time. If there were other things that the On-Site Coordinator had to do to keep the program going, those things would get priority. Data collection would take a back seat.

• <u>Options for data collection</u>

The goal was to minimize interview time and not completely sacrifice the interaction which enriched the participants' answers. One strategy was to have teachers administer the survey in class during a regular class period. All participants would answer the survey at the same time, thereby saving many hours. The teacher could make the process interactive. S/he could move through the questions one by one, clarifying potentially difficult concepts, and being a resource for anyone who wants to ask a question.

In early February, the team decided that it was willing to invest time in interviews (as distinct from group data gathering in class) as long as they had confidence in the information that the instrument was gathering. They decided to stay with the content focus on employee involvement, even though "the measure may not be 100%." They suggested paring down the interview form and triangulating information two or three different ways in one section -- as a control on the kind of data that was being collected. They also decided to gather complete demographic information on participants.

• <u>To have a control group -- or not</u>

At the same time, the team was considering advice from the SPSS trainers about selecting a control group. The trainer described three options for selecting a control group:

-- randomly select a control group and test it at pre-post
-- randomly select a control group and test it at post only
-- match each member of the experimental group with a control as close to age, numbers of years in company, etc. as possible. (See Appendix B)

How to manage data collection with a control group when the data collection for the experimental group was already burdensome was a problem which the Manager of Human Resources struggled with. Of all the team members he believed most strongly that the design of the evaluation would be compromised if there were not control group.

The evaluation facilitator argued that there was value in descriptive data on the experimental group alone -- especially at this stage of the evaluation process. But it is likely that the Manager of Human Resources had a more-realistic view of what his managers would consider persuasive evidence of the benefits of the Basic Skills Program. The team never did include a control group in the evaluation activities because of the extent of the work required.

• Catching up with SPSS training

In late January, in preparation for the first training in SPSS, the Manager of Human Resources installed the tutorial program and went through it to get a basic understanding of the system. In mid-February the trainers offered their first training in SPSS to four members of the evaluation team. The trainers were not accustomed to teaching people whose knowledge of computers and statistics was limited and the result was a training that overwhelmed more than it instructed.

One of the trainers returned to Norton to provide a more-tailored, hands-on training. But the team continued to struggle to keep the coding and analysis process on track. This was the result of infrequent on-site technical assistance sessions, job changes for key people on the team, and the enormous amount of data that had already been collected, was still being collected, and needed to be coded.

• Expanding the content focus of the evaluation

The Manager of Human Resources had had some doubts about the content focus of the survey. Feedback from Donald Cichon, the measurement consultant, in early March clarified a gap in the content focus. The measurement consultant suggested that employee involvement in the organization be expanded to include employee involvement on the job. Specifically, this would mean modifying the survey questions to include items that assess if and how program participants are "more involved" at their jobs -- collaborating more, taking initiative, problem solving, etc. These items come closer to assessing job performance than the original items.

The Manager of Human Resources supported the redesign of the survey. He supported the amount of time that would have to be spent in the redesign and considered it "the cost of this kind of decision." He was interested in exploring further the "describable behaviors that support the business strategy" and in finding a way to show the company managers more specifically what they are getting from the Basic Skills Program.

Employee members of the team suggested a process for identifying which elements of employee involvement on the job should be included in the survey. They did not claim to know exactly which elements should be included. They did suggest that if a few employees answered the following questions the team would be better able to define the component parts of improved employee involvement on the job:

-- Do I want to learn other jobs? Which ones? Why?
-- How many wheels a day do I let go that I shouldn't?
-- What can I do to help to improve quality and generally support the business, and why should I do it?

The team also explored another option for defining the component parts of improved employee involvement on the job. That option was to train supervisors to document in an ethnographic way what employee involvement on the job is. This option would include supervisors in defining the evaluation criteria -- something that, along with employee input, could only strengthen the program and validate the items.

These options for involving employees and supervisors in the process of defining indicators for improved employee involvement on the job were exciting. Perhaps because these options are time consuming and build a new layer of data collection into the process, the team moved in another direction instead.

The team opted to see how the Basic Skills Program evaluation might tap into or build on the new company-wide performance appraisal process and categories. Underneath this option for expanding the survey content through overlap with the performance appraisal process lay the question: should the team be looking at performance instead of involvement? There may still be some difference of opinion among team members about the answer to this question.

• Using performance appraisal criteria

The measurement expert reviewed the performance appraisal criteria and gave the team feedback. He suggested that the team use the new performance review as a framework for new survey questions but that they break down categories further. He also assured the team that the five question areas which the team adapted from the performance appraisal, and the three levels of information asked for within each area, were conceptually elegant.

The five question areas are: improvement in your work area; morale in your work area, communication between shifts; safety; work flow. The three levels of information are: awareness of problems; action needed to correct the situation; does employee initiate some action. These new questions are correlated to the Performance Evaluation so that, conceivably, information from one system can supplement information from another. (See Appendices C, D, E and F.))

Phase III: Gathering, organizing, analyzing, and reporting the information

Gathering and organizing the data

The Process Evaluation:

In May of 1993, the facilitator convened a special three-hour meeting of the committee to address the question: What needs to be in place in the program in order to enhance the likelihood of achieving the goals? In this meeting team members reviewed a set of indicators established by the Massachusetts Workplace Education Initiative for each component of a quality workplace education program and assessed their program against those standards. They judged whether their program was within quality range for each indicator or whether an action needed to be taken to bring the component into quality range. (See Appendix G.)

The survey:

The Norton Company evaluation focused at first on the involvement in the organization of employees who were or are enrolled in the Basic Skills Program. The original plan was to collect information on employee involvement in several ways, including:

(1) an intake questionnaire for participants who are enrolling in the basic skills math class for the first time, to gather base-line data against which other data can be compared;
(2) a "maintenance" questionnaire for participants who are enrolled in the program, to collect follow-up data in regularly scheduled intervals -- perhaps every eight weeks;
(3) an exit interview for participants who have completed the program;
(4) an interview for supervisors;
(5) an interview for participants who completed the program before the evaluation was begun to collect retrospective data.

The intake and maintenance questionnaires -- those parts of the evaluation system which have been developed -- focus on whether a program participant has been asked to participate in or volunteered for a range of activities in the organization. These activities include:

- participation in teams/committees like Basic Skills, Material Waste, ISO, Safety, Total Quality Waste Team;
- involvement in customer interface projects/initiatives like giving plant tours, surveying customers, visiting other plants and/or customer sites;
- involvement in skills development projects/initiatives like college courses, GED preparation, job-related math skills, language classes;
- involvement in training projects/initiatives like cross training, facilitator training;
- involvement in special projects like community work/volunteer efforts (United Way), company-wide or team projects, special presentations;
- involvement as a trainer or a tutor;
- awards/recognition received.

The intake questionnaire also includes a self-assessment of job attitude, job knowledge, production, quality of work, flexibility, and being a team player.

Newer questions focus on involvement on the job as outlined above. More specifically:

- There is now a co-worker assessment comparable to the self- assessment. It asks the participants to rate co-workers on the same criteria they have just evaluated themselves on.
- There are five new broad questions adapted from the performance appraisal with branching questions for each area that assess the participant's awareness of problems in the area, the action needed to correct the situation, and the participant's record of taking some appropriate action. The questions are:

    -- Are there improvements which need to be made in your work area?
    -- How would you evaluate the morale in your work area?
    -- Do you think it is important to communicate between shifts?
    -- What is the last unsafe condition you are aware of?

-- How is the work flow in your area affected by vacations or days out?

The evaluation began with gathering data from the intake interview in September 1992. Team members understood that it would take time to build up to the five-phase evaluation system they had planned. However, they did not anticipate the problems that lay ahead, keeping up with data collection and mastering SPSS.

They had planned that preliminary analysis of the early data would help to direct the next phase of the evaluation. They had anticipated that preliminary analysis of the data would shed some light on the answer to the question: does participation in the Basic Skills Program enhance employee involvement? They anticipated that long-term data collection and analysis would provide a more complete answer.

The On-site Coordinator was responsible for conducting interviews with the majority of the program participants. He was assisted by members of the Basic Skills Committee. In the summer of 1993 the On-site Coordinator coded the data on all the questionnaires completed to date and thus prepared them for programming on the computer. The On-site Coordinator was inexperienced with computers, and eventually took a course to familiarize himself with the computer functions that would permit analysis of the data he had so carefully coded.

A member of the support staff in the Training Department had been assigned the job of typing in the coded data. She had participated in the original SPSS training the previous February and was prepared to begin to work on SPSS. This person soon received a promotion and was replaced by someone who had to be introduced to SPSS.

This new person received individualized instruction from the SPSS trainer. However, she injured her back, was out of work for a while, and by the time she returned needed additional instruction. She had not used what she learned quickly enough and needed retraining. After she was retrained she typed in the data but there were still problems. The data were not typed correctly. Other responsibilities made continued work with the data less of a priority for her. At this point, the Educational Coordinator took it upon herself to clean up the data and work with the trainers to achieve a preliminary analysis.

The Educational Coordinator is a very busy person who had herself recently received a promotion. She was now responsible for overseeing the development of Basic Skills Programs in other Norton plants throughout the northeast region of the United States. She was motivated to master the elements of evaluation because she wanted to replicate the process in the new programs.

Unfortunately, she encountered a few problems when she tried to carry out her plan. The first problem was the volume of data she had to sort through. There were several iterations of questionnaires; hundreds of variables; and hundreds of respondents. The second problem was that the data were more inaccurately recorded on the computer than anyone had anticipated.

At this point the SPSS trainers might have taken over the clean-up and programming of the data. However, they continued to operate as outside resources. In retrospect, this was the result of how close to being cleaned up everyone thought the data were. These problems plagued the analysis until the last meeting.

The facilitator had developed a plan with the Educational Coordinator and the SPSS trainers to spend two days at the Norton Company finally running some preliminary analyses. Again, the data were compromised and no real analysis was possible. Problems kept popping up that took hours to solve.

These problems were all traced back to a short-cut that the On-site Coordinator had taken with the original coding of the data. He had coded the data on the questionnaires themselves instead of on proper coding sheets. This was time saving in the short run and disastrous in the long run. (The SPSS trainer had cautioned against this kind of short cut but, in the end, gave the O.K.) It meant that there was no record of the placement of the coded items other than in the computer where they were clearly compromised.

As indicated above, there is a plan to complete some analyses of the data. The Educational Coordinator will complete this work in her own time, culling what is useful for replication purposes.

Analyzing the data

The Process Evaluation

These are the seventeen components of a quality program which the team reviewed, and the actions team members needed to take to bring the component into "quality range." If no action was needed, then "No action" is stated.

Component #1: Articulate Philosophy of Program.
No action

Component #2: Develop and Implement Outreach and Recruitment Plan.
Action:
- Recruit employees with lower skills
- Tie recruitment to personal needs as well as company needs
- Involve supervisors in recruitment

Component #3: Provide Orientation
No action

Component #4: Establish Intake Procedures
Action
- Establish an intake procedure that defines a "career path" for the participant.

Component #5: Design and Implement Initial Assessment Activities
Action:
- Think through a way of assessing if learning objectives at both the individual level and level of the class are being met, and if the skills being transferred.

Component #6: Develop Curriculum
Actions:

• Review the curriculum so that it supports the goal to enhance involvement.
• Condense the curriculum and make it more Norton-specific.
• Ensure that the instructional method supports the goal.
• Continue training for instructors.

Component #7: Select Appropriate Learning Arrangements
No Action

Component #8: Develop On-going Assessment Procedures
No action

Component #9: Ensure Support Services
Actions:
• Forge linkages with higher education programs. For example, the GED program at Quinsigamond and college-level courses there.
• Think of the program as a continuum from basic skills support to intermediary support to college level survival skills, all in preparation for bridging to higher education. Joe Passeri and Kathy Rentsch can run informational meetings at Norton; others can offer support/instruction in creative thinking and problem solving.

Component #10: Staffing
No Action

Component #11: Staff Training and Development
Action:
• Continue training for instructors

Component #12: Program Planning, Evaluation, Monitoring and Management
Actions:
• Joe Passeri and Bethany Brockmeyer should meet at least once every two weeks to plan the facilitation of the Basic Skills Committee meeting
• Solicit supervisors for the Basic Skills Committee
• Add instructors to the Basic Skills Committee
• Make the meeting time of the Basic Skills Committee more convenient (For example, once a month make it earlier)

Component #13: Tracking and Reporting
Action:
• Reduce the time it takes to process recommendations to the Steering Committee.

Component #14: Fiscal Management

Component #15: Facilities

Component #16: Follow-up/Exit
Action:
- Document why people leave the program and use the information to enhance recruitment.

Component #17: The Business Education Partnership
No action

The results of actions taken from the process evaluation include:

- Supervisors have become more involved in the Basic Skills Committee
- The Basic Skills Committee has become more employee-run. Employees are making more suggestions about how to bring attention to the need for and benefits of the Basic Skills Program. For example, at a Basic Skills Committee meeting one employee suggested that the CEO for Bonded Abrasives be invited to comment on how education has value for modernization. He suggested that the comment become a paragraph in a subsequent company newsletter and that student quotes should also be added to this newsletter review.

The survey

To date, the team has been able to produce only the most preliminary analysis of the survey data. As described above, preparing for analysis has been a far more arduous task than the team members, facilitator or trainers foresaw. In summary, there are several reasons for this.

- The coding process was long and arduous. There are three versions of a survey that has many variables. Each survey required its own coding scheme.
- Changes in personnel in the training office required instructing a new person in coding and programming midway through the activities.
- The SPSS consultants live several hundred miles away from Worcester. Although we did not anticipate the distance being a problem, the distance made it impossible for the consultants to provide the hands-on support that some Norton employees required while they mastered this data-base.
- Changes in the structure of the company and in the positions of key personnel (other than support staff) who supported the evaluation made it difficult to maintain continuity of focus on the project.
- Changes in the structure of the company coupled with the amount of time that had elapsed since the evaluation began, began to shift the perspectives of key players on the team about the most important indicators of success.

However, the team remains mostly comfortable with the goal of enhancing employee involvement, especially on the job. The Educational Coordinator said: "It (still) measures a more realistic outcome than productivity or the quality of the product." The Manager of Human Resources is not sure that involvement in the organization (beyond involvement on the job) is still a meaningful outcome.

One practical suggestion about how to speed up the analysis of the remaining data (and provide a more-simply digested set of results) is to aggregate categories in the survey into a single measure of involvement. For example, aggregate the categories "volunteered," "participated," and "tried" for Questions II A through H. "Involved" might be designated as a score of 1; "not involved" as a score of 0. (See Appendix)

Additional evaluation-related finding

Five of the eighteen to twenty people who bid to be a group leader in May 1993 were from the Basic Skills Program.

Preparing a strategy for reporting the findings

The more-active members of the Basic Skills Committee have been informally reporting the results (in the broadest sense) of the evaluation to other members of the Basic Skills Committee and other Committees throughout the company as needed. Reporting in this case is not limited to a formal written report of results of the survey. Such a thing does not yet exist and may not exist for some time. However, considerable discussion about the evaluation and its relationship to program planning has taken place and has moved the program forward.

Phase IV: Deciding what happens next

Taking follow-up action

The team decided that:

• The team has good basic information and it should be analyzed for its own sake. Start with an analysis of the demographics of the people who have participated in the program. Then proceed to a simple review of frequencies for all the variables for insights into what the program has achieved.

• The team should analyze the current data before changing the instrument to see exactly what the current instrument is able to demonstrate. The objective itself -- improved employee involvement -- may have little appeal outside the training department, unless it can be linked to more bottom-line issues. The concerns of the other managers are more directly linked to the bottom line. Is quality better? Are we producing more? Is there more of a profit? The Basic Skills Committee is faced with the challenge of demonstrating to the management groups that this program is working in terms that make sense to them. Analysis of the current data may help to clarify how address this challenge.

• If the evaluation focus on employee involvement is maintained, the size of the instrument should be reduced before being used in the future. There are too many data provided by the current instrument. While current data should be analyzed, future data can be reduced by modifying the instrument. Keep the common threads so the data will be comparable.

• The team should make better use of existing information in the company and tie this information into evaluating the effect of the Basic Skills Program. One option is to focus on participant job performance and use the data available from performance appraisals to enhance the evaluation .

• The team should involve the thirteen new businesses in Bonded Abrasives in a process of redefining the goals and objectives of the Basic Skills Program. This might mean establishing thirteen Basic Skills Committees and a mechanism to correspond among them. Opening up the process in this way will help the team to redefine the focus of the evaluation and to establish evaluation methods that can better assess if the program is helping participants do their jobs better and improve their lives.

• Supervisors should be solicited to give concrete measures of improved employee performance on the job. This information should be merged with what is learned from a review of the performance appraisal.

• The team needs to think through how to use evaluation results to improve the program.

• The team needs to specify audiences for the evaluation results and what the team wants to say to them.

Evaluating the evaluation

These are comments which team members and the evaluation facilitator made about the evaluation process:

• The Norton team should have considered hiring out certain aspects of the evaluation to consultants. Conducting a basic skills program evaluation of this scope is a big job. There comes a point when internal staff cannot extend themselves beyond their regular jobs and consultants should be used.

• More hands-on technical assistance from the SPSS consultants would have helped the team. The SPSS consultants could have set up the database, ensured that data entry was clean, and generally worked more closely with the team.

• The work of the evaluation went on for too long, losing continuity of purpose. Some of the reasons for this were not controllable. Core team members changed their jobs and this changed their roles on the team. Support staff also changed and required additional training and "catch up" time. But the time-line could have been tightened, especially by reducing the scope of the preliminary analyses. An earlier preliminary analysis might have inspired the team to go forward with the analyses in other manageable increments.

• The team agreed to continue to discuss the appropriateness of employee involvement as the central focus of the Basic Skills Program evaluation. The evaluation process has been valuable but the Manager of Human Resources is left feeling that the original instrument -- edited to include the new focus on employee involvement on the job -- is not measuring what the company wants to know about in a valid and reliable way. The Norton team redefined its evaluation focus midway through the project. In extending the focus to employee involvement on the job, the team came closer to evaluating "the competencies which are at the heart of what is needed to take the company where it wants to go." But improved job performance might be a more appropriate indicator. Discussion of these concerns should continue.

• The Educational Coordinator is pleased with what she has learned and is poised to think through how she can apply this to workplace education programs which she oversees in other plants.

IV. REFLECTIONS

Facilitator Laura Sperazi's comments:

• The Norton team would have fared better if they had collected fewer data on fewer people -- and mastered some of the fundamentals of data management -- before trying to manage several data sets with hundreds of variables in each. The general lesson to teams which is derived from the Norton Company experience is: collect information as soon as you can, then analyze it promptly; do not wait for the data to be perfect before you try to make sense of what you have. This is especially true for inexperienced teams who are just learning how to evaluate.

• SPSS is a good database program but other, more simple programs would be less intimidating for teams to use. Lotus or Data Ease are good examples of these. If team members are familiar with Lotus or other database programs they should begin by using these familiar programs for evaluation purposes and then graduate to more sophisticated programs, if needed.

• Everyone -- team members, facilitators, consultants -- need to learn to be comfortable with the slow evolution of focus for an evaluation of a workplace basic skills program. Knowledge grows along with time, staff changes, incremental opportunity to discuss items in new and different ways, and with lessons learned in other areas of work.

PROJECT REACH: CIVIL SERVICE EMPLOYEES ASSOCIATION AND THE NEW YORK STATE GOVERNOR'S OFFICE OF EMPLOYEE RELATIONS

Case Studies of Two Workplace Education Programs
by Paul Jurmo

Introduction

In 1986, the State of New York (through the Governor's Office of Employee Relations, GOER) and the Civil Service Employees Association, Inc. (CSEA) established a jointly-administered education program for state employees. Titled Project REACH, the program provides a wide range of basic skills educational services.

This two-part case study examines how two REACH sites -- one at the State University of New York (SUNY) at Stony Brook and the other at SUNY Albany -- have adapted the team evaluation concept to their particular programs. These sites differ from the other cases presented in this report, because they were facilitated not by the authors of this research but by two adult educators trained by one of the authors and another specialist in collaborative planning.

As such, their experience might be more representative of other programs in which people with limited prior experience with the team evaluation methodology are "out there on their own," trying to adapt it to their situation. For readability's sake, the two cases are presented separately, although in the early stages the two site facilitators did some preparatory work together.

SUNY at Stony Brook

I. PROGRAM BACKGROUND

In 1992, the assistant director of SUNY Stony Brook's Residence Hall Operations attended a REACH-sponsored seminar on the potential of workplace education programs. Management had concluded that approximately 25 percent of its workforce might benefit from a workplace basic skills program. In early 1993, REACH was asked to explore setting up some kind of program, presumably focusing on basic reading and writing skills. As it does at all its sites, REACH asked that SUNY set up an advisory committee which REACH staff could in turn discuss options with.

REACH consultant Muriel Medina was contracted to conduct an organizational needs analysis (ONA), to clarify educational initiatives which REACH and SUNY might pursue.

II. BACKGROUND ON THE TEAM

History of the team

The advisory committee set up at REACH's request constituted a planning team which Muriel could work with to carry out the ONA. The resulting ONA report (whose executive summary Muriel distributed in both English and Spanish) identified math, reading and writing, and ESL as educational initiatives which the department might undertake. This range of services extended beyond the "basic reading and writing" focus which management originally had anticipated for the program. It in fact came as something of a surprise to management that employees expressed so much interest in ESL, because they had had access to university-provided ESL courses for some time. However, those courses were not tailored to the specific needs of those who attended, and thus apparently didn't capture the employees' interest.

The committee decided to set up one class for the summer, a seven-week math course. It was agreed that Muriel would serve as coordinator, helping the team to set up and oversee this and possibly other courses. The committee felt that, by beginning with math, the program would avoid being seen as "just a program for the non-English-speakers and custodians." Math would be a "crossover" course, mixing people of different language backgrounds and departments (i.e., custodians and maintenance employees). After that course, a second course on "technical communications" (i.e., reading and writing) was implemented.

After each course, Muriel facilitated a team evaluation process described below. Both courses were deemed to be a success, and it was agreed that a third course -- on ESL -- would be offered.

Stakeholders represented on the team

The advisory committee with whom Muriel worked was composed of three higher-level managers from the residence hall operations department, the union president, seven other custodial and maintenance employees, and two representatives from Project REACH (one representing GOER and the other from CSEA).

III. THE PROCESS WHICH THE TEAM WENT THROUGH

<u>Phase I</u>: Facilitator prepares herself and prepares the team.

Joint preparations with coordinator from SUNY Albany

The "facilitators" of the team evaluation process at the two SUNY sites were the site coordinators themselves. This fact distinguished them from the other cases profiled in these case studies. In those other sites (Bull Worldwide Information Systems, Datatec Industries, Haartz Corporation, Norton Company, and Victoria General Hospital) the facilitator role was played by "outsiders." These outsiders had considerable experience with the team evaluation methodology and a significant investment in that approach. At the SUNY sites, the coordinators had an interest in the team notion, but no real prior experience using it.

The two coordinators (Muriel Medina at Stony Brook and Carol Young at Albany) agreed that, to prepare themselves for their roles as evaluation team facilitators, they would get some extra up-front help. This help came in the form of on-site workshops and informal telephone consultations provided by outside resource persons Paul Jurmo and Sue Folinsbee.

These interactions between the two outside resource persons and the two site coordinators took the following forms:

March 1993 workshop: On March 17, 1993, Sue Folinsbee and Paul Jurmo conducted a workshop in Albany on the organizational needs analysis (ONA) methodology developed by Sue in Canadian workplaces. The workshop was hosted by Project REACH for the purpose of introducing staff of REACH-funded basic skills programs to the ONA methodology. ONA was presented as an initial step in a larger program planning cycle. ONA was a process in which stakeholders collectively examine what makes for a productive employee, how basic skills play a role (or don't) in productivity, and what initiatives a workplace might undertake to enable each employee to reach his/her potential. Participants analyzed how they might gather and analyze information in a simulated ONA. They emerged from the workshop with an understanding not only of the ONA methodology per se but of the notion of involving all stakeholders in an integrated planning process.

July 1993 workshop: By early July, Carol Young and Muriel Medina had each carried out ONAs in their respective sites. In the process, they had set in place a team planning process which they wanted to continue. Although it was still early in that process, they wanted to prepare themselves to lead their teams through an evaluation when the appropriate time arrived.

To do so, Paul Jurmo met with them in Albany on July 6th for a five-hour workshop. Carol and Muriel were introduced to the initial steps of the team evaluation process outlined below. They were challenged to anticipate how their respective teams might answer the questions of "who wants what information for what purpose?," what are the goals of the program?" and "how might data be gathered and from what source?"

Muriel and Carol shared their responses to those questions, finding that they had much in common. In the process, Carol, Muriel, and Paul built a closer working relationship, agreeing to lend each other mutual support as they proceeded with their evaluation work. It was agreed that, now that Carol and Muriel had thought through some of the initial steps of planning a team evaluation, they would be better prepared to discuss evaluation issues with their teams in the coming months.

Telephone feedback: In this preparatory period and subsequently, Carol, Muriel, and Paul had informal telephone discussions, giving each other updates and feedback as needed.

By participating in these preparatory activities, the two site coordinators "did their homework" for the work which lay ahead.

Facilitator prepares her evaluation team

As stated above, Muriel was presented with an already-existing advisory committee when she was hired to plan and coordinate the Stony Brook program. As Muriel led the committee through the organizational needs analysis, members gradually began to create an identity for themselves as active decision makers rather than as a passive "rubber stamp" group merely giving formal approval to decisions made by others.

As the planning process turned to the question of what role evaluation would play in the programs, Muriel introduced the advisory committee to this more-specific topic at a meeting on July 21st. She discussed the continuing role of the committee and the role which evaluation might play now that the summer math course was underway. She used handouts to explain (1) the advantages of a team-based evaluation over traditional "external evaluator" models, and (2) the roles team members might play.

Phase II: Planning the evaluation

Clarifying program goals

In the July 21st meeting, Muriel not only discussed the notion of team evaluation, she led the team through the step of clarifying program goals. In this case, the team brainstormed the full range of goals which might be served by REACH, rather than just the summer math course. These broad goals were identified as follows:

Overall goal: to have training be interesting and useful.

Personal development
- provide opportunity to go to promotion interviews.
- improve self-esteem.
- to make people hungry for more learning.

Work atmosphere

• meet the needs of Residential Operations.
• improve morale even more.
• create a feeling of caring.
• have better employees.
• make sure information gets to <u>all</u> employees.
• move toward 50% release time and 50% worker's own time.

<u>Information/Skills</u>
• improve productivity.
• offer refresher courses to Cleaners in Spanish as well as English.
• improve English language skills.
• improve job-related skills.
• improve job-related reading skills.
• provide opportunity to receive GED.
• offer job-related courses.

<u>Program as a model for other workplaces</u>*
• expand, possibly, to other departments, allowing their employees to participate if there are openings.
• share what we're doing at Residential Operations and how we've gone about it, if other departments want to model a program after ours.

* This was rated as less important compared to other goal categories.

Identifying who wants to know what information for what purpose

In the July 21st meeting, Muriel displayed three flipcharts with the headings of "Who," "What information does the person want to know?" and "For what purposes? (Why does the person want to know?" Team members brainstormed the following responses:

Who	What information	For what purposes
Supervisors	• Did they learn anything in class? • Are they able to use what they have learned?	• To make supervisor's job easier.
Person attending class	• What do they need improvement in? • Was best information given in class for their need and management's need?	• To better themselves. (It makes them feel better about themselves.) • For career advancement.
Co-workers	What information was learned in class?	• To communicate better. • To improve teamwork.
Management	How to make information from the workshop available to other workers?	• Better productivity. • Save money. • Improve self-esteem.

All employees in Residential Operations	• What was learned in class? • What levels are the courses?	• To better understand what the class was about. • To help work force. •To know if they are qualified to take the courses
Local-level union	How is the program being offered?	• Is money being spent wisely? (It will affect spending for future programs.)
Union at other levels: • Regional director • State president	Have I (local union president) done my job to see if program has been administered fairly to all?	• Budgetary and monetary responsibility.

After this exercise was over, Muriel realized that there was confusion among some team members about what was being asked in the "For what purposes" column. It appeared that some members thought this was asking "for what purposes" the course itself was being offered, rather than "for what purposes" the various stakeholders wanted to know particular information.

She concluded that, in the future, this task needs to be explained clearly to team members, particularly because this was not something any of them had ever been asked to go through before.

Designing a strategy for gathering data

On August 17th, Carol and Muriel met in Albany with resource persons Paul Jurmo and Sue Folinsbee and three others interested in learning about team-based evaluation. The meeting was structured as a day-long workshop in which the participants would, as a group, help Muriel and Carol design a strategy and instruments for gathering the data appropriate for their sites.

Muriel presented the lists, outlined above, which her Stony Brook team developed in response to the question of "who wants to know what information for what purpose?"

Carol likewise presented her list. She explained that, because her program was not yet as developed as Muriel's, she had not gotten as much input from her team about the information various stakeholders might want.

The workshop participants then reviewed sample instruments from other sites, noting which of those instruments focused on the kinds of information Carol and Muriel wanted. Carol and Muriel identified several data-gathering activities which they would like to use in the coming year. Muriel's activities are presented below. See the case study for SUNY Albany for Carol's list.

Data-gathering activities which Muriel would like to use in the coming year

Interviews with:
- -- participants in math class.
- -- their supervisors
- -- their co-workers

(These would produce information for employees and supervisors. Would prefer to do this orally rather than in writing. But might consider a "quickie" questionnaire.)

Designing data-gathering instruments

As a next step at the August 17th workshop, Muriel and Carol -- with the help of other workshop participants -- prepared drafts of the data-gathering instruments they hoped to use.

They broke into the two groups, one to help Muriel develop her instruments and the other to help Carol. As they divided into their groups, participants were urged to consider the following guidelines:

Things to consider when developing drafts of data-gathering instruments

1. Clarify what category(ies) of information* you want to gather from the source(s) you've selected.
2. For each category of information you want, brainstorm questions you want answered. Be as specific as possible.
3. Once you have developed your questions, decide:
   - -- Who would use this instrument?
   - -- From whom would the information be collected? (And how will you select those sources/informants?)
   - -- When (and how often) will you use these instruments?
   - -- When you have collected the information, how will it be organized? By whom?
   - -- Who will analyze the information once it's organized? How will they do so?
   - -- How and when would the resulting data and analysis be presented? To whom?

   * "Categories of information" in this case were five types of information which the resource persons have identified as typically sought in workplace education evaluations, as follows:

What Information Do Workplace Education Evaluations Commonly Want?

1. What are the goals of the program? (What are stakeholders' expectations?)
2. What in fact is being achieved in the program (in terms of both anticipated and unanticipated outcomes)?

3. Should stakeholders continue to invest in the program?
4. What are the strengths and limitations of the program? (What factors are helping to produce positive results? What factors are inhibiting progress?)
5. What actions need to be taken to strengthen the program in the future?

The two groups then produced drafts of data-gathering instruments and plans for using those instruments. Muriel's instrument and plan are presented below. (See the SUNY Albany case study for information on how Carol designed her instruments.)

Muriel's instrument and implementation plan

Questions to ask supervisors

1. Goal-related questions:
   (For those who knew about the course)
   a. What do you believe the purpose of this course was?
   b. What did you hope the course would accomplish?

   (For those who might not have known about the course)
   c. Did you know about the course this summer?
   d. What do you believe was the content of the course?

2. Questions focusing on anticipated and unanticipated outcomes:
   a. What have you seen as results from your workers taking this course?
   b. What kinds of changes have you seen in your workers?
   c. What impact has it had on your work team?
   d. Which of those results did you expect?
   e. Which results were surprising?

3. Questions related to whether to continue the program:
   Would you recommend that other supervisors support a course like this? (Would you recommend to other supervisors that their workers attend this course if it's offered again?)

4. Questions related to program strengths, limitations, and needed improvements:

   Strengths:
   a. What was the benefit to you as a supervisor of having your worker(s) in this course?
   b. What, in your opinion, were the benefits for your workers (if any)?

   Limitations:
   a. How could the course be improved?
   b. How could the following aspects be improved?

- Communication about the course (to supervisors and workers).
- Supervisors' involvement.
- Scheduling/release time
- Content of the course

c. What would make the course more valuable to supervisors?

d. What other basic skills courses would be helpful for your workers?

- Reading?
- Writing?
- ESL?
- Oral communication?
- Problem-solving?
- Others?

Implementation plan

1. First week of September: Muriel will meet with advisory committee to expand on "Who, what info, for what purpose, and how" list. Meeting will have three goals: (1) flesh out categories, (2) come up with 3 drafts of instruments for feedback, and (3) report what classes will start in fall. Committee will develop a work plan, make decisions about who will do what.

2. October.'93: Will present the analysis of data to committee in draft report and decide how to distribute results.

3. October.- November '93: Will present final report.

4. November '93: Distribute results.

Phase III: Gathering, organizing, analyzing, and reporting the information

Gathering, organizing, and analyzing the data

At the August 17th workshop, the resource persons had presented the participants with guidelines for organizing, analyzing, and reporting data. Referring to them, Muriel returned to Stony Brook to work with her team to create interview guides and questionnaires from the core questions developed on August 17th. To do so, the team referred to the "Who wants what information" flipcharts to identify what questions to ask of particular sources.

The team then gathered information from four sources: (1) participants in the summer math course, (2) workers who signed up but did not participate, (3) supervisors of class participants, and (4) union representatives.

Several team members gathered information. For example, the Director of Residential Operations distributed the questionnaire for class participants and kept track of those who returned it. One of the two class participants on the team served as interviewer, gathering data from supervisors.

As the responses from these sources were recorded, they were conveyed back to Muriel. She summarized the responses on her word processor, then circulated them back to the team to review.

In a meeting in late September, a subcommittee of the team reviewed the responses. Members coded them, cut them apart, and taped the responses on the wall under categories identified by the team. When the data had been categorized in this way, Muriel asked the team members to go back through each category and note any observations or comments they might have. She recorded their observations and asked them then to add any recommendations.

Muriel typed up the team's summary of data, comments, and recommendations in a draft final report.

Reporting their findings

The subcommittee agreed that, before disseminating the report widely, they should first present the draft report to the other members of the team. Despite being a bit nervous, each subcommittee member presented a section of the draft report to the other team members. Presentations were made on the process used, the data gathered, and the subcommittee's recommendations.

Muriel made the first of these presentations, modelling how to make a presentation for the other subcommittee members. The draft report was well received -- and adopted -- by the other team members.

It was agreed that the team would now disseminate the report to other audiences with an interest in REACH. Muriel hoped that the report would be well presented and well received, although this is something over which she could exert little influence.

<u>Phase IV</u>: Deciding what happens next

Taking follow-up action

Based on the positive findings regarding the first course, the team agreed to offer a second course. This course focused on "basic communications for the workplace," which dealt with job-related written and oral communications. The team went through a similar version of the original process to evaluate this 20-hour course, with team members using modified versions of the earlier data-gathering activities. (One initial interest questionnaire distributed to potential participants was printed in both English and

Spanish, although it's not clear what effect adding Spanish had.) The facts that the team didn't have to develop totally new instruments -- and had already had practice gathering and analyzing data -- made the team more inclined to jump into a second round of evaluation activities.

In a January meeting, the team once again reviewed the collected feedback and agreed to offer a third course, this one on ESL. The process of organizing and analyzing this second round of data was carried out smoothly. The director of residence hall operations asked his secretary to type up a summary of the data, and team members efficiently reviewed and analyzed each section of the data in the January meeting. Team members did so as if this was now something routine and normal.

The team concluded from this second go-round that (1) learners enjoyed the instructor and the course, (2) they were now becoming a "learning community," and (3) they had developed valuable communication skills (e.g., clear and concise speech, listening, body language, clear writing of memos and accident reports, openness to geting along with others). Participants' main complaint: lack of parking made it hard to get to class.

Evaluating the evaluation

Feedback from SUNY management

According to the senior management representative on the team, the evaluation team process was very useful. He said that he initially approached the program with assumptions about course content which turned out not to fully represent the realities and interests of the workers. By involving various representatives of the workforce, he got a better feel for their needs and interests. The result was that the participants felt that the program was their program, not just another management mandate.

He acknowledged that the amount of time required upfront to put together the evaluation plan was a limitation. However, he saw that the time was well spent, as it produced positive results which are now ongoing. "You have to do the upfront groundwork."

He also sensed that some workers might have resisted the initial ONA process, but they came to see Muriel not as a spy but as a professional trying to find out what they needed.

He also feels that the advisory committee process fits in with the quality team concept now being promoted by the university. Other departments on the campus are now looking into setting up an education program. He is advising them to take the team approach and -- particularly -- do an ONA, something he sees as "an absolute necessity."

He also felt that it was useful to have a trained facilitator overseeing the process. He acknowledged that no one else on the team had the necessary background.

Feedback from the funder

The representative of the Governor's Office for Employee Relations serving on the team generally found the process to be useful. It not only helped to build a meaningful program at SUNY Stony Brook but demonstrated options which other REACH programs might adapt.

She noted that, as the team got more experience, team members worried less about the evaluation process itself. Their questions became more focused on questions vital to improving the program. Team members have taken increasing ownership for not only the process but for the education program itself. This was, of course, what REACH hoped for when it originally set up the advisory committee.

She concurred with the senior manager's concern about the amount of time which the team spent to plan the evaluation rather than focusing more directly on implementing the course. She felt that this planning time could be reduced. This would be particularly important in other sites which wouldn't have the luxury of having a trained facilitator to do the "handholding" necessary to do detailed planning of evaluation activities.

She felt that the facilitator was skilled in summarizing points and otherwise keeping the team meetings running smoothly and on target. The process opened up to team members the idea of letting members' voices be heard. The process gave members an opportunity to participate. It remains to be seen whether this experience will have an impact on the larger organization.

REACH will be exploring how this process might be adapted to other sites. As a funder, REACH needs clearer information about program impact across sites. It is not clear as yet how site-level teams might respond to this funder need. REACH might eventually do a centralized training of its site coordinators, focusing on needs and options in the area of evaluation.

Feedback from the facilitator

The team facilitator said that she would most definitely continue to use a team approach in her workplace education work. If she has the choice, she would prefer to work only with team-oriented programs.

She found the process to be essentially sound and would make only minor adjustments to streamline and refine the process. She would like, for example, to find ways to get evaluation findings out to a broader audience, including potential program participants in particular.

She was pleased to find that, despite limitations of time and prior experience, team members were able to grasp the tasks they faced and carry them out. This suggested that they had taken ownership for the process and felt that the team gave them an opportunity to have their voice heard and play meaningful roles.

She advised facilitators to be careful, on one hand, not to overwhelm newly-formed teams with tasks they can't handle. However, on the other hand, facilitators shouldn't underestimate team members. If given encouragement, members are able to stretch themselves and try out unfamiliar tasks like interpreting data, jotting comments on yellow "sticky notes" and organizing them on the wall, using flipcharts, making presentations to a group, and so forth.

She acknowledges that someone with experience and time is needed to facilitate such a process. The fact that few workplace educators currently have such experience or time might make transporting this process from site to site difficult. She felt that her own upfront training in this process helped her avoid pitfalls.

The facilitator also noted:

• Given the fact that the potential clientele for the program included many non-native-English-speakers, extra efforts needed to be made to have that population represented on the team.

• Facilitators should also provide meaningful roles for members all the way through the process, not just in a few initial activities.

• Top-level management can do a lot to make or break a team. If they are willing to try sharing decision-making with others, the process has that much more chance of succeeding. Conversely, autocratic managers can block or destroy the team process. One advantage of a team: an autocratic or otherwise uncooperative member can be countered by the rest of the team.

• Teams should be flexible about who serves as members. If someone consistently cannot attend meetings, the team should find out why. If that member is simply too busy, he or she might have to delegate a stand-in or step aside and let someone else serve. If that member is not coming for some other reason, the team should ask why and try to deal with whatever is inhibiting participation.

• Teams also need to encourage members who are shy or not fluent in English to participate as fully as possible rather than be relegated to a secondary role.

IV. REFLECTIONS

Paul Jurmo's comments:

• Despite some initial miscommunications with management about her role and what the education program might achieve, the facilitator persisted and carefully and systematically carried out the ONA and evaluation process. She was fortunate to have a team which had the right mix of leadership, patience, time, and willingness to try new roles. The team, in turn, was supported by their state-level funder, who made it clear it was interested in seeing how both the education program and the team process worked. As the team got more experience, they became more comfortable with the idea of running their own evaluation and education program. As such, the SUNY Stony Brook case demonstrates many of the elements required to make a planning and evaluation team work.

• REACH had hired the facilitator to help get a program up and running. Its policy was to hand control of the program over to the site advisory committee. As the Stony Brook committee now makes that transition, it is faced with the question of "what next?" That is, will the team be willing and able to carry on some version of the team planning process, especially with a new program coordinator with no prior experience with this approach?

• The state funder is also faced with the challenge of figuring out whether it might adapt parts or all of this evaluation model to its own evaluation needs at the state and site level.

SUNY at Albany

I. PROGRAM BACKGROUND

CSEA and GOER -- through Project REACH -- agreed in fall of 1992 to establish a workplace basic skills program for custodial workers at SUNY Albany. REACH hired workplace education specialist Carol Young to plan and coordinate the program. When she was scheduled to begin the planning process in March 1993, Carol participated in a workshop conducted by Sue Folinsbee (of ABC CANADA in Toronto) and Paul Jurmo (of Literacy Partnerships of East Brunswick, NJ) on the "organizational needs analysis" process developed by Ms. Folinsbee. (See Phase I below.)

Carol Young used this methodology to analyze how custodial workers used basic skills on their jobs. She concluded that, for their current jobs as presently structured, they had limited need for reading, writing, and math. When she presented her findings to the advisory committee, it was agreed that the basic education program not focus so much on specific job-related uses of reading and writing since few such applications existed. Rather, learners would develop skills through practice applying them to whatever reading and writing tasks were of interest to them. While some of these might be taken from their current jobs, many of them would, presumably, come from contexts outside their immediate jobs.

In early October, the 10-week program got underway. The curriculum followed a "whole language" approach. It focused on helping learners develop their own strategies for dealing with print rather than mastering "skills" defined by others. Classes were taught by two instructors from a local adult basic education center.

II. BACKGROUND ON THE TEAM

Stakeholders represented on the team

Because it is a joint labor-management effort, REACH requires each of its sites to be overseen by a committee composed of a mix of management, union, and worker representatives. This was also the case at SUNY Albany, where the coordinator was provided with a team composed of state-level representatives from CSEA and GOER, frontline workers from day and night shifts, a few learner representatives, a higher-level manager, a supervisory janitor, and one representative each from the Employee Assistance Program and SUNY's central headquarters.

III. THE PROCESS WHICH THE TEAM WENT THROUGH

Phase I: Facilitator prepares herself and prepares the team.

Joint preparations with coordinator from SUNY Stony Brook

As at SUNY Stony Brook, the "facilitator" of the SUNY Albany evaluation team process was the site coordinator, in this case Carol Young. This fact distinguished both sites from the other cases profiled in this study. In those other sites (Bull Worldwide Information Systems, Datatec Industries, Haartz Corporation, Nortoncompany, and Victoria General Hospital) the facilitator role was played by "outsiders." These outsiders had considerable experience with the team evaluation methodology and a significant investment in that approach. At the SUNY sites, the coordinators had an interest in the team notion, but no real prior experience using it.

The two coordinators agreed that, to prepare themselves for their roles as evaluation team facilitators, they would get some extra up-front help. This help came in the form of on-site workshops and informal telephone consultations provided by outside resource persons Paul Jurmo and Sue Folinsbee. (For details of what happended in those workshops and consultations, see "Joint preparations with coordinator from SUNY Albany" under Phase I of the Stony Brook case study which precedes this one.)

Facilitator prepares her evaluation team.

Carol had been presented with an already-existing advisory committees when she was hired to plan and coordinate the program. As she led her team through the organizational needs analysis, the committee gradually began to create an identity for itself as a group of active decision makers rather than as passive "rubber stamp" groups merely giving formal approval to decisions made by others.

By July, Carol's team had spent most of its time figuring out how to pull together a program incorporating the recommendations of Carol's ONA. Little time was given to the question of evaluation other than to acknowledge that, at some point, an evaluation would be done. Carol even prepared an introductory exercise in which team members would do basic planning of their evaluation, but the team didn't have much time to focus on those activities.

<u>Phase II</u>: Planning the evaluation

Clarifying program goals

Despite being distracted by the tasks involved in getting the program up and running, Carol was in a July team meeting able to get them to pay attention to some evaluation-related questions. She got the team to brainstorm what they felt the program should focus on. They identified reading, writing, and GED preparation as the focal points of the program. They did not require that the program be particularly job-related.

This limited goal statement can be compared with the more-comprehensive list of tentative goals which Carol had identified in her July 6th workshop with the SUNY Stony Brook coordinator. At that time, she felt that the program might:

1. Help non-readers to read.
2. Help participants identify educational goals and get on a path toward those goals.
3. Establish ongoing computer-assisted instruction at SUNY.
4. Establish ongoing study groups facilitated by learners.
5. Reach every shift.
6. Establish a model for working with REACH sites.
7. Develop a replicable model.

(In October, Carol noted that, despite these early negotiations about program goals, some team members still weren't clear as late as October what the program was to accomplish. This confusion, she felt, was due to the fact that the program had first been talked about as a job-related program, but the ONA had indicated that workers used little reading and writing on their jobs. The committee had then agreed to let the program take a broader focus, but apparently some team members didn't really catch on to -- or buy into -- the ONA's findings and continued to assume that the focus would be job-related reading and writing.)

Identifying who wants to know what information for what purpose.

Because for much of the program cycle the team was focused almost exclusively on getting and keeping the program going, it team did not get around to the details of mapping out an evaluation strategy. Carol thus never got their input about the question of "who wants to know what information for what purpose?"

She held in reserve the tentative list she had brainstormed on July 6th. This tentative list was as follows:

Who	What Information	For what purposes
• SUNY Central • EAP Coordinator • Upper-level mgt. -- Director -- Asst. director • Union leadership • Mid-level mgt. (Dir.of Maintenance) • Supervisors -- Custodial -- Maintenance • Participants • Co-workers • In Albany: -- GOER -- CSEA • Ed. consultant	• Do they like class? • Do they buy in and continue? • Beyond this program, will they continue with other education (what support should we provide?) • Has their self-esteem improved? e.g., … as a learner … self-confidence … self efficacy e.g., handling stress, taking risks. • Can this model be "exported"? • What are individual's goals? Do individuals achieve their goals?	• To document curriculum's successes (what works). • To decide REACH's future directions. • To clarify participants' personal goals and clarify paths to meeting them.

Designing a strategy for gathering data

Carol went ahead and mapped out a tentative strategy for collecting the information she anticipated the team would want. She did so in the August 17th workshop described under "Designing a strategy for gathering data" in the SUNY Stony Brook case study.

With input from other workshop participants, Carol developed the following list of data-gathering activities she hoped to use:

Possible data-gathering activities to be used at SUNY Albany

- Observation (and videotaping) of student presentations at graduation.
- Pre- and post- interviews with learners.
- Something for a group of supervisors. They would evaluate program and/or clarify initial goals and follow-up at end of program.

In presenting this list, Carol explained that, because her program was not yet as developed as Muriel's, she had not gotten as much input from her team about the information various stakeholders might want.

Designing data-gathering instruments

As a next step at the August 17th workshop, Carol and fellow coordinator Muriel Medina -- with help from other workshop participants -- prepared drafts of the data-gathering instruments they hoped to use. (For details of how this was done, see "Designing data-gathering instruments" in the SUNY Stony Brook case study.)

Carol held onto those draft instruments for several months until her program reached a point toward the end of the instructional cycle when the team was ready to turn its attention to evaluating the program. At that point -- in November -- Carol presented to the team her ideas for a series of questionnaires (for students and supervisors) and interviews with students. Team members reviewed the questions she had prepared for those activities and suggested adjustments. With that input, Carol firmed up the data-gathering activities described under Phase III directly below.

Phase III: Gathering, organizing, analyzing, and reporting the information

Gathering, organizing, and analyzing the data

As stated earlier, as classes got underway the project committee focused most of its energies on organizing and supporting the classes. Some data-gathering was done in the beginning weeks for the purposes of assessing learner interests. This was done through pre-program interviews conducted with individual students by instructors.

The idea of evaluation was introduced to supervisors in a "sneak preview" session in October before classes got underway. Supervisors and potential participants were brought into the classroom and participated in a sample class. At that session, the supervisors and potential participants were told they would be consulted toward the end of the program, to get their feedback.

At the end of the instructional cycle, Carol disseminated a questionnaire to students and supervisors to ask for their feedback on what was accomplished and how the program might be improved. Instructors also met with individual students or pairs of students to get feedback via interviews.

Learners also gave feedback to team members at the end-of-program graduation ceremony. Several learners made presentations about the benefits they had accrued in the program. One such benefit was having the opportunity to revise the forms they have to use on the job, to make them more usable.

Carol compiled the results of these end-of-cycle activities, finding that, in general, participants liked the class, as it got people into a positive learning situation while increasing learner confidence. This was less true for lowest-level learners, who apparently felt that the class was above them. In their feedback, learners also indicated an interest in a GED-preparation class.

Reporting the findings

Carol presented the results of the end-of-cycle data-gathering at a team meeting in January 1994. One team member questioned whether the feedback given by learners to instructors was colored by learners' reluctance to say anything critical to the instructors who had tried to help them.

The team's make-up was in flux at this stage, with the learner on the team being replaced. This sudden injection of a new member disrupted the continuity of discussion about the program.

Phase IV: Deciding what happens next

Taking follow-up action

Because the findings indicated that the learners at SUNY-Albany might need other learning opportunities (ranging from tutoring for lower-level learners to GED classes), program administrators have arranged to have a REACH-sponsored Learning Resource Center available to all state employees in the area, including participants in the SUNY-Albany program. This would allow state employees of all skill levels to pursue educational opportunities beyond those offered at specific worksites.

The team also agreed to continue meeting as a team and carry out planning and evaluation activities in the future. At this writing, it was unclear just what the program would consist of in the future, so specifics of planning and evaluation activities were not known.

Team members did agree, however, that in future evaluations team members other than the instructor would be in charge of interviewing students. This would deal with the possibility that learners would be reluctant to give critical responses to their teacher.

Evaluating the evaluation

Looking back at the above evaluation process, Carol Young identified a number of positive aspects of the team process, including:

- The attempt to introduce a team planning process and to get the team to focus on evaluation questions was useful. It gave an opportunity for some members to get involved in the program in a way they might not otherwise. For example, one supervisor became the team's "workhorse," making sure things were done.

- Instructors saw that Carol was interested in their opinions and felt free to talk with her about concerns and suggestions for concrete steps to improve the program.

- The idea of inviting feedback from supervisors was a good one, as it involved an important category of stakeholders who might otherwise have been overlooked.

- Interviews proved to be a useful way of getting feedback from learners, too, better than reliance on just an end-of-cycle "smile sheet."

- The team process allowed various interest groups who might otherwise not have communicated due to intra-organizational politics to work together around a common concern.

- Having a team member from the funding source (REACH) was useful in that it kept team members alert and positive.

Carol felt that the process was, however, limited by a number of factors, including:

- The fact that it was a 20-hour course, and thus no one had a lot of time to give to evaluation per se.

- The make-up of the team fluctuated, with members coming and going due to changing management priorities.

- Asking for feedback from those involved in the program can be frustrating if higher-up decision-makers are not ready to listen to and respond to that feedback. For example, learners became frustrated when they made suggestions for improving the forms used on the job, but administrative guidelines didn't allow those suggestions to be easily implemented.

• The program had several false starts, resulting in lack of clarity about program objectives. The evaluation team had to contend with these different expectations, making it hard to focus. In the future, programs should be run by a team from the start. The team would begin with an organizational needs analysis which would show what needed to be done. The team would also set ground rules about the need to avoid arbitrary decisions, quick changes in membership, and other important issues.

• Teams need to be aware that work organizations often have internal politics which can lead people to criticize the education program when they are really angry about something else entirely.

Carol also noted:

• While the team evaluation idea and process are fundamentally useful, the process has to be made easy enough for members to really use. For example, it might not be realistic to expect team members -- who have limited time and expertise -- to go through the full process of designing data-gathering instruments from scratch.

• This approach to planning an employee education program is likely to work best in organizations already committed to team planning.

IV. REFLECTIONS

Paul Jurmo's comments:

• Putting together a team evaluation in this site was not easy, as the facilitator was presented with a team which had not fully agreed on the program's purposes or on basic groundrules for operating as a team. The program was also conceived as a short-term pilot project, and the team was not prepared to invest a lot of time in details of planning an evaluation.

• She was thus forced to do a lot of the work of planning data-gathering activities herself. The danger in such a case was that the activities she planned might not really capture the interest of other team members and they wouldn't pay much attention to the information generated. Despite these limitations, the facilitator persisted and was -- with technical assistance from others experienced with team evaluation -- able to pull together some evaluation activities which produced information of use to the team.

• The SUNY-Albany facilitator noted that facilitators in other evaluation teams need to make the process as smooth (efficient, easy) as possible. One way of doing so would be for the facilitator to come prepared with basic frameworks for various instruments into which members can plug specific questions.

VICTORIA GENERAL HOSPITAL

Halifax, Nova Scotia

A Case Study Prepared by Paul Jurmo

I. PROGRAM BACKGROUND

In late 1992, Victoria General Hospital (VGH) -- with partial funding and technical assistance from the Nova Scotia Department of Education (NSDE) -- had run an employee basic skills program for two years, having expanded from six employees from one department to twenty from eight departments.

The program takes a "learner-centered" approach, focusing on personal learning goals negotiated by the participant with the instructor. These personal goals vary from learner to learner, and break down into:

Academic goals (e.g., "earning my GED," "improving my writing");
Self-confidence (eg., "feeling more relaxed");
Job-related goals (e.g., filling out forms, qualifying for other jobs);
Non-job-related goals (e.g., helping their children, further education).

These learner goals were summarized as follows:

"To enable participants to develop self-esteem, reading, writing, oral English, and math skills needed to solve problems they identify as of personal interest to themselves."

II. BACKGROUND ON THE TEAM

History of the team

From its inception in fall of 1990, the program had been overseen by a project team composed of representatives from hospital management, one of the hospital's unions, and the NSDE. In 1991-92, two program participants joined the team, as well.

In early 1993, the team approached ABC CANADA, a national foundation based in Toronto whose services include providing technical assistance to workplace education programs. VGH asked ABC for guidance on setting up a program evaluation, to document the program's positive impact and thereby help ensure ongoing support from the hospital administration.

By coincidence, ABC's workplace consultant, Sue Folinsbee, had already begun preparation of a collaborative evaluation methodology which ABC hoped to field-test in one or more sites. This evaluation project was being developed with Paul Jurmo, who had already begun a similar project in the United States with Laura Sperazi, under National Institute for Literacy funding.

In response to VGH's stated interest in evaluation, Sue Folinsbee and Paul Jurmo agreed to "use" VGH as a test site for the collaborative evaluation methodology they were developing for Canada and the U.S. In turn, it was hoped that VGH would not only produce a meaningful evaluation but -- for the longer-term -- set in place an ongoing evaluation system.

Stakeholders represented on the team

In a meeting on March 29, 1993, the project team was -- for the purposes of this project -- organized with the following nine representatives of program stakeholder groups:

<u>Hospital management representatives</u>:
- Two from the Training and Development Department:
    - -- An evaluation specialist.
    - -- The education program coordinator for 1992-93.
- Three from the eight departments sending workers to the program:
    - -- One from Food and Nutritition Services
    - -- Two from Modern Cleaners (a contractor to Housekeeping)

<u>Union representative</u>:
- One from the Canadian Brotherhood of Railway, Transport, and General Workers, one of the hospital employee unions.

<u>Program participant representative</u>:
- One, an employee in Food and Nutrition Services.

<u>Education provider representatives</u>:
- Two from the Literacy Division of the NSDE. (Both had, in earlier years of the program, served as instructors.)

III. THE PROCESS WHICH THE TEAM WENT THROUGH

<u>Phase I</u>: Facilitators prepare themselves and organize the team.

Initial preparations

In this case, the "facilitators" were Sue Folinsbee and Paul Jurmo, workplace education specialists who -- as noted above -- had agreed to provide technical assistance to VGH. They prepared themselves by:

• Interviewing the VGH program coordinator by telephone: They clarified program status, team make-up, and why VGH now wanted to do an evaluation.
• Asking project team members to complete a questionnaire: Members specified what help they needed, what they had already done vis-a-vis evaluation, who was involved, and what kind of information they might want to gather in a future evaluation. This helped the facilitators understand the team's evaluation-related experience and concerns, while getting team members in the mode of thinking about evaluation.

Organizing the evaluation team

Until early 1993, the team's role had been largely an advisory one, responding to requests from education staff. It had not to that point engaged in any kind of formal evaluation activities.

To help the team to begin thinking about what they might want out of an evaluation, the coordinator talked with members in two team meetings about what evaluation meant, why do it, and the steps and responsiblities involved. These discussions ensured a basic understanding and buy-in on the part of team members. Team members then filled out the above-described questionnaire sent them by the facilitators. By carrying out these discussions and completing the questionnaire, members were thus oriented to their new roles as evaluators.

The facilitators prepared a plan for their first meeting with the team, based on the results of the questionnaires. The education coordinator reviewed this plan and explained the meeting's agenda to the team prior to the meeting.

Phase II: Planning the evaluation

Clarifying program goals

It was originally thought that, in a single meeting on March 29th, the facilitators could help the team analyze its education program and prepare an action plan for additional evaluation activities. Time did not permit all of those objectives to be met in one session. Instead, the team:

• Clarified who the program's stakeholders were. Stakeholders included not only the groups represented on the team but higher-level management and learners' families and communities, too.

• Clarified program goals (i.e., stakeholders' expectations). The team summarized a mix of academic, self-confidence-related, job-related, and non-job-related objectives. They synthesized those goals into the following goal statement:

"To enable participants to develop self-esteem, reading, writing, oral English, and math skills needed to solve problems they identify as of personal interest to themselves."

• Clarified to what extent those goals have now been met. Referring to what they said in the earlier questionnaire, the team developed a list of positive outcomes already achieved by the program. These included examples of many of the hoped-for academic, self-confidence, job-related, and non-job-related outcomes, as well as the following unanticipated outcomes:

-- increased supervisor interest in worker education,
-- a new kind of "benefit" for workers,
-- improved management-employee relations,
-- improved understanding across departments,
-- learner-written materials now used in other adult education programs,
-- expanded tutor skills and relations with learners, and
-- strengthened educators' expertise and professional relations.

• Clarified what evaluation activities they had used so far. The team identified the following as activities they had used for evaluation purposes: feedback from participants, learner self-assessment, GED exam, team discussions, formal written reports, review of attendance figures, and observation of learners in various program activities.

• Identified lessons learned from those evaluation activities. The team identified lessons which the above evaluation activities had taught them about (a) the program's overall strengths and needed improvements and (b) steps needed to improve the evaluation system used to date. The latter evaluation-related improvements included:

-- Document why the program should be continued/re-funded.
-- Get more input from learners.
-- Clarify why people drop out.
-- Focus on outcomes for the institution (e.g., increased participation by workers in "quality" activities).
-- Clarify how the program has changed over time (e.g., why enrollment is lower this year).
-- Find out if "graduates" might want to be involved or help aferward.
-- Ask learners for feedback on course content and what they might want to do next.
-- Involve managers and supervisors more actively in defining what information they need from the program.
-- See our evaluations as a way of adding to the body of knowledge for the workplace education field (e.g., NSDE).

Identifying who wants to know what information for what purpose

In the second half of the March 29th meeting, team members began mapping out a strategy for future evaluation activities. They did so by responding to the question of "who wants to know what information for what purpose?"

In the first case, the "who's" for the evaluation (i.e., the audiences who want information) were divided into "primary audiences" (i.e., the President's Executive Council, prospective students, program staff, NSDE, VGH department heads, union representatives, and current participants) and "secondary" audiences (i.e., the print shop, audio-visual services, and training and development department which support the program; and tutors).

To answer the second part of the question (i.e., "what information" is needed), the team reviewed the responses they had given to the pre-workshop questionnaire and agreed that the following list represents the questions they wanted to answer in this evaluation:

"What Information" Do We Want Now?

Establishing the need:
- Is there a need for employee upgrading?

Clarifying what was accomplished:
- What do stakeholders see as benefits of the program?
- Are participants moving toward meeting their goals?
- Does management see changes in participants' attitude, flexibility, or confidence which could lead to improvement in job performance?
- What was useful?
- How valuable is the program?
- Is there any way of showing how increased employee education can in any way be related to improved quality care?
- Does the union see any benefit or improvement from their perspective?

Deciding whether to continue:
- Do we continue the program?
- Should it be an ongoing program?
- How can we justify continued funding?

Deciding how to strengthen the program in the future:
- Are we doing the right things to address the problems/opportunities/the best approach to delivery?
- If the program is meeting student expectations, how can it be improved?
- How improve the overall planning and implementation process, to increase participation and ensure more effective planning of future programs?
- What do we repeat?

• What do we leave out next time?
• How does the project team feel about the quality of its own work as a team?

The team members then answered part 3 of the question (i.e., "for what purpose" will this information be used?):

"What Purposes"
Will the Above Information Be Used For?

• To ensure program improvement/efficiency: to help us optimize the "fit" between our goals and actual outcomes
• To ensure ongoing support for the program: to ensure financial resources from funders, as well as buy-in, cooperation, and investment from stakeholders.
• To model a "continuous improvement" approach to management: By critically analyzing our education program, stakeholders will get practice in team planning skills they can use back in the larger organization.

Designing a strategy for gathering data

At the March 29th meeting, time ran out before the team could proceed much further with designing the evaluation strategy. Subsequently it was agreed that the facilitators would return for a second meeting, to help the team pull together specific tools and a longer-term evaluation strategy.

Between the two meetings, the facilitators prepared minutes of the March 29th meeting and circulated them to the team members to reinforce what was learned in that meeting.

The facilitators then prepared a plan for the second meeting, along with an action plan outlining ideas for a longer-term evaluation project.

On April 19th, the team met with the facilitators a second time. Rather than look backward (as was the focus in the first meeting), in this second meeting the team was much more "action"-oriented, focusing more clearly on specifics of planning an evaluation. To get this planning going, the facilitators presented their action plan, which proposed the following four phases of evaluation activities, to be carried out through December of that year:

Phase I: Looking back at what has been achieved to date (April-June 1993)

Step 1: Develop drafts of data-gathering instruments at 4/19/93 meeting
Step 2: Prepare to use instruments for first phase of data-gathering
Step 3: Use the instruments to gather the data
Step 4: Organize the resulting data

Step 5: Analyze the data
Step 6: Prepare a final report
Step 7: Present the final report
Step 8: Take follow-up action

Phase II: Preparing for more-comprehensive data-gathering in the fall (June-August 1993)

Phase III: Collecting data in fall 1993 (September-November 1993)

Phase IV: Analyzing the data collected in the fall (November-December 1993)

The team agreed to adopt this plan, noting that details of Phases II, III, and IV would be planned when results from Phase I were in.

Designing data-gathering instruments

To design the data-gathering instruments to be used in Phase I, the team first considered three questions:

1. What are possible sources of the information we want to gather?
2. What activities might we use to gather information from those sources?
3. What are the advantages and disadvantages of each of those data-gathering activities?

In a large group, team members responded to the first two of those questions. As possible sources of information they identified current program participants, potential participants, management representatives from eight participating departments/floors, participants' co-workers, instructors and tutors, program "dropouts," and documents. As possible ways of gathering information from those sources, they cited interviews, questionnaires, focus groups, review of documents, observation, anecdotal evidence, simulations, and learner portfolios (containing participant journals, checklists, sample writings, and other evidence of learner progress).

Breaking into two groups, team members analyzed the pro's and con's of each of the above data-gathering activities. They said that, optimally, instruments should provide efficient collection of information from those who know the program, reinforce communication links among stakeholders, and respect confidentiality. Data-gathering activities should not intimidate respondents, intrude on busy schedules of both information source and information gatherer, breach confidentiality, allow bias to influence how data are gathered or analyzed, or overlook the full realities of the program and informants' thinking,

The team now better understood the data-gathering options open to them, and then proceeded to select which instruments they would use and to prepare working drafts of those instruments. They agreed that, whichever activities the team selected, the instruments should be relatively easy to learn and use in the time available and should focus on the information needed by the identified audiences.

To be sure they would gather the information needed most immediately, the team agreed that they would collect information to answer the following questions:

Information Needed for Phase I

<u>Outcome-related information</u>

- What has been accomplished to date?
- Should the program be continued/re-funded and, if so, at what level?

<u>Program-improvement- related information</u>

- What have been the goals of the program so far (for both individuals and for the organization) and what might they be in the future?
- What actions need to be taken (and by whom and when) to improve the program?

The team agreed that, in the first phase of the pilot project, the following data-gathering activities might be used. (Given the limited time the team had to give to this data-gathering, these activities were listed in order of priority.)

Data-Gathering Activities for Phase I

1. Focus groups and interviews for current and past participants.
2. Focus groups for supervisors (from eight departments) having contact with participants.
3. Focus groups and interviews for those who chose not to participate before or during program.
4. Interviews with potential participants.
5. Interviews and focus groups with education staff.

To help those team members who had never designed a data-gathering instrument before, the facilitators displayed a sample instrument, a guide for a focus group to be conducted with supervisors. The facilitators noted that the questions asked in that focus group would be essentially the same questions asked of other sources participating in focus groups or individual interviews. The facilitators explained that this consistency of questions is important because it allows the team to compare what various sources say about the same questions.

The sample guide for a focus group for supervisors was as follows:

Sample Focus Group
for Supervisors

1. Individually, supervisors rate how well the program has achieved its overall goal on a scale of 1 to 10. (1= "not very well," 10 = "extremely well")

2. In small groups, supervisors come to agreement on #1 with reasons for their rating.

3. Small groups then answer the following "outcome-related" questions.

   a. What kinds of changes have you seen in your employees?
   b. What impact has the program had on your department?
   c. What, if anything, wasn't achieved that you hoped would be?
   d. What were any unexpected outcomes?

4. A spokesperson from each group presents to the large group a summary of the small group discussion on #2 and #3 above. This discussion is recorded on flipchart paper by a facilitator.

5. The process for #3 and #4 is repeated with "program improvement" questions. (See below.)

   a. What are the strengths of the program?
   b. How could the program be improved regarding:
      • Content and topics
      • Teaching style
      • Time (scheduling) of program
      • Release time
      • Location/facilities for program
      • Support services (extra counselling . . .)
   c. How could the program better recruit new students, advertise the program, and retain current learners?
   d. Should the program be continued/re-funded?
   e. Should the program be expanded? If so, in what way(s)?

The team reviewed this sample guide for a focus group for supervisors, suggesting revisions in wording and asking for clarification. It was agreed that these basic questions would, as much as possible, be adapted for other data-gathering activities to be carried out by the team.

In two groups, members prepared drafts of guides for the other focus groups and individual interviews the team had earlier agreed to carry out. They reconvened and displayed the draft wording of their instruments on flipchart paper. The team agreed on working versions to be used when they next actually went out and gathered data.

The facilitators took some time at this point to raise the following issues for the team members to keep in mind as their evaluation work proceeded:

Issues Needing Further Attention

1. When do we use sampling? And how do we do it?
2. How do we develop necessary interviewing skills?
3. What do we do with supervisors who don't know which of their employees are in our program? How do we maintain learner confidentiality in such a case? Do we ask learners first?
4. What options are there for those who can't attend a focus group? Do we leave them out? Do we try to arrange a second focus group and/or individual interviews for them?
5. How do we identify "informal leaders" among potential participants to be interviewed?
6. When interviewing education staff and tutors, be sure to ask them to identify personal outcomes they have achieved by working with the program.
7. Avoid using individual names, to protect learner confidentiality.

After discussing those issues, the team agreed who would be in charge of using which instrument, when data would be gathered in the next 1-2 months, and to whom the resulting data would be given.

Phase III: Gathering, organizing, analyzing, and reporting the information

Gathering and organizing the data

During the period of May through July 1993, team members used interviews, focus groups, and questionaires to collect information from 43 informants, including 19 program participants, four "early terminations," three instructors and two volunteer tutors, seven supervisors, and eight members of the planning team itself.

As members realized the difficulty of organizing so many data-gathering activities with limited time and personnel, they pared down the data-gathering schedule accordingly.

Those using the instruments summarized the responses and relayed them to the project coordinator. She recorded the responses in writing and on her computer, and then organized them by cutting and pasting them into meaningful categories.

She took pains to be both concise and detailed enough to reflect what the informants actually said. She also tried to avoid inserting any "editorial comments" of her own. If such comments came to mind as she recorded the informants' responses, she noted them in a separate space titled "coordinators' interpretations." (See "Analyzing the data," below.)

With long-distance guidance from the facilitators via telephone, the coordinator laid out an outline into which she could insert the data. The key categories of the outline were the four major questions which the team had set out to answer. Under each of those questions, she had sub-categories organized by data source. The resulting outline looked like this:

Outline for organizing the collected information

1. <u>What have been the goals of the program</u>?
   a. What learners said
   b. What "discontinued" learners said
   c. What education staff (both paid and volunteer) said
   d. What management/supervisors said
   e. What the project team said
2. <u>What has been accomplished to date</u>?
   a. What learners said
   b. What education staff (both paid and volunteer) said
   c. What managers/supervisors said
   d. What the project team said
3. <u>Should the program be continued and why</u>?
   a. What learners said
   b. What education staff (both paid and volunteer) said
   c. What managers/supervisors said
   d. What the project team and discontinued learners said
4. <u>What actions need to be taken to improve and expand the program</u>?
   • <u>Course content and teaching style</u>
   a. What learners said
   b. What education staff (both paid and volunteer) said
   c. What managers/supervisors said
   d. What the project team and discontinued learners said
   • <u>Location</u>
   a. What learners said
   b. What education staff (both paid and volunteer) said
   c. What managers/supervisors said
   d. What the project team and discontinued learners said
   • <u>Scheduling/time</u>
   a. What learners said
   b. What education staff (both paid and volunteer) said
   c. What managers/supervisors said
   d. What the project team and discontinued learners said
   • <u>Recruitment and retention</u>
   a. What learners said

b. What education staff (both paid and volunteer) said
c. What managers/supervisors said
d. What the project team and discontinued learners said

• Staff development
a. What learners said
b. What education staff (both paid and volunteer) said
c. What managers/supervisors said
d. What the project team and discontinued learners said

Analyzing the data

The coordinator now had in front of her a pile of pages filled with responses. To help the team to analyze those responses, she first read through them and began jotting down her own personal observations, questions, ideas, and interpretations. She recorded these under the heading of "coordinator's interpretations."

She then sent to each team member a summary of the data gathered along with her personal interpretations. She asked each team member to essentially do what she just did: review the responses and jot down his/her personal interpretations.

In its third meeting (on August 6th), the team shared their interpretations, keeping in mind the following questions prepared by the facilitators:

Questions to Consider When Interpreting Data

- What conclusions can we draw from these responses? (How should we interpret these responses?" What reactions do you have?)
- Do certain points need clarification?
- Do you agree or disagree with particular points?
- Are there any surprises here?
- Are there any conflicts or contradictions in the data?
- Which recommendations should we "keep" in our final report?
- Which recommendations need to be changed?
- Which should we not include in our final report?

In response to each section of the data, team members brainstormed various observations, questions, and recommendations which were recorded on flipcharts.

Preparing a strategy for reporting the findings

To pull these findings together in one or more final reports for its intended audiences, the team agreed on the potential formats for each audience, who would be responsible for preparing draft reports, how and when they would be reviewed by the team, how and when the report(s) would be presented, and how the team should be prepared to take follow-up actions after the reports were presented. They prepared the following timeline, tying these elements together:

Preparing the VGH Report:
Things to Do

1. Audience: Aim at the President's Executive Council (PEC) in particular.
2. Formats: Prepare both an executive summary and a more-detailed version. Be sure to include all responses given.
3. Who responsible: Christine (the coordinator) is in charge of preparing the report, with help from others (including possible editing help from ABC CANADA). Explore getting another computer to help with editing.
4. Timeline for preparation of report:
   - Draft due: approximately September 6
   - Final report due: mid-September.
5. Presentation to PEC: approximately late September. (Training and Development representative will arrange this presentation.)

With that mandate, the coordinator prepared a final report, presenting each section of data and the team's recommendations for various concrete actions related to those findings. Also included in the detailed report was a brief history of the program, a history of the evaluation project, a description of the evaluation methodology, and appendices with details of the instruments and information sources used. An executive summary was included, summarizing key findings and the team's recommendations. (See Appendix.)

Reporting the findings

In late September, the coordinator circulated copies of the report to the team. They agreed that the team member with closest links to the team's primary audience, the President's Executive Council, would arrange to have the report presented to the Council and other intended audiences.

One of the first audiences to see the report was the new instructor who was replacing the outgoing project coordinator. She found that it helped her understand the program's history and needs.

In early December, the head of the Training & Development Department responded very favorably to the report. (See references to "the most senior management representative" under "Evaluating the evaluation" below.) He constituted the team's link to the President's Executive Council and had the authority to see that many of the report's recommendations were implemented.

Phase IV: Deciding what happens next

Taking follow-up action

To anticipate what evaluation-related activities might follow the presentation of the report, the team -- at the August 6th meeting -- reviewed its action plan of April 19th. Now that they were ending the first round of data-gathering activities, the team agreed to continue incorporating evaluation into its planning activities, emphasize the generation of quantitative data, and clarify what the new instructor should do regarding evaluation.

In reality, the team has taken the following actions since the report was presented to the various audiences:

- The program has been refunded at higher levels.
- A new coordinator was hired, with more hours than the previous coordinator had.
- Classes were resumed in the fall with 32 learners and 11 tutors (up from 20 learners and 10 tutors from the previous year). VGH continued to increase funding as additional learners signed up.
- VGH allocated permanent secretarial help, office space, and a classroom.
- The coordinator had, by early December, begun planning mini-workshops for learners as well as a student handbook.
- The instructor tried using tutors as aides in the math class. This idea, however, didn't work out as hoped and was discontinued.
- Three former participants are now serving as tutors, something not done before. Their department has given 50/50 release time to allow the participants to do this. (Their department head is a former tutor and team member herself, and has consistently championed the program.)

Due to major changes going on elsewhere in the hospital, by December several key team members were no longer able to attend team meetings. Those remaining on the team agreed that they needed "new faces" on the team, as "reinforcements."

Those who remained on the team also agreed that evaluation needed to be continued in some way -- even if not as extensively as had been hoped for in the original evaluation strategy -- because "it is too good to let go of completely." One option considered: reduce the number of data-gathering activities and concentrate on a team meeting in which members prioritize actions they need to take.

Evaluating the evaluation

In the August 6th meeting, the team assessed the evaluation process, as follows:

Team Members' Feedback
About the Team Evaluation Process

Goals/expectations for the evaluation project:

VGH's expectatations:
- To learn how to evaluate the program.
- To develop a process of evaluation.
- To determine outcomes and needed improvements for the program.
- To get information needed to justify funding.
- To document the value of the program.

ABC's/U.S. National Institute for Literacy project's expectations:
- To develop a process of evaluation which others might adapt.

What was actually accomplished:
- All of VGH's expectations were achieved except developing more-specific, clear evidence of program outcomes, especially work-related ones. (But the team doesn't want a standardized test.)
- The team has in general now developed a foundation for further evaluation work.
- Timing of the project was good, as the team wanted to do an evaluation at just the time that the facilitators were looking for a site to work with.

Strengths and limitations of the project:

Strengths:
- The facilitators' help was fast, responsive.
- Their facilitative style "brought it out of us," helped team members do it themselves.
- VGH provided good support.
- Good documentation was kept of the project.
- Project built team identity, brought out members' strengths.

Limitations:
- Project took a fair amount of time.
- The facilitators were far away.
- Members didn't have a complementary computer and modem for easy communication, editing, etc.
- Data-analysis step could have been abbreviated with clearer guidelines.

How the process might be improved in the future:
- Give members training on data-collection before asking them to conduct interviews, etc.
- Get additional feedback from people who did data-gathering about how it went.

• Revise data-gathering tools used as soon as possible, so we don't forget problems we ran into or effective ways of using them.
• Pilot the tools and revise them before fully using them.
• Consider following up individually with members of focus groups, if it appears they might have more to say in private.
• Ensure larger/broader representation of supervisors when they are interviewed.
• Be careful not to be too ambitious in an evaluation activity (e.g., trying to gather too much information from too many sources.)
• Get learners to be more concrete and identify their goals on an ongoing basis.

Looking back on the process several months later, the original project coordinator raised several issues:

• There is a need to avoid using evaluation as a way of judging learners. Maintaining confidentiality is vital, to avoid threatening learners in any way by revealing information about their basic skills to others who might use it to manipulate learners.
• The facilitator needs to be careful not to over-influence team members' interpretations of the data. At the same time, there is a value in the facilitator sharing his/her interpretations, to provoke further thinking by other team members.
• The presence of "outside experts" as facilitators gave a certain legitimacy to the process, providing a kind of "checks and balances" to reduce the possibility that the internal team would allow their biases to shape the findings. The outsiders also were able to guide inexperienced team through the steps, helping to make the process as smooth as possible.

The coordinator also felt that the evaluation process had not only enabled her to contribute to the program but given her an opportunity to develop new professional skills. She called it "a fantastic experience," a high-point in her career.

Another team member felt that the evaluation helped create a solid foundation for the program, particularly by establishing good relations among stakeholders. This -- coupled with the good word put out by satisfied learners -- led to increased attendance. She also felt that the report showed that the program was "accountable." She will include a summary of the report's recommendations (especially for a full-time instructor) when she submits the next funding proposals.

The most senior management member on the team was reportedly very pleased by the report and the evaluation process. He felt it was done professionally, and he felt its use of a number of informants gave the process validity. He felt it provided a road map to follow, a shared vision for the program's future. This was particularly important to him, as he was relatively new to the education program.

He was also pleased that the recommendations were realistic and that team members took the initiative to begin carrying out many of them, without waiting for him to locate resources and figure out how to respond to the report. This showed the potential of the self-directed work teams being implemented in the hospital.

Two months after completing the report, the team continued to refer to its recommendations, using them as a guide to see "how are we doing." However, some of the key players on the team have now left, due to changes in personnel unrelated to the evaluation process.

IV. REFLECTIONS

Facilitator Paul Jurmo's comments:

The VGH team was successful in producing a useful evaluation for several interrelated reasons:

• Team members were motivated to do an evaluation from the start, having requested help. They thus saw a need and saw the value in committing time into the process. This allowed them to be flexible and patient, willing to work with the facilitators to adapt the evaluation process to their own situation.
• Several team members had considerable expertise in adult education, evaluation, or other relevant areas. Those lacking such experience were nonetheless open -- and felt safe enough -- to stretch themselves and take on new roles in the evaluation process.
• The hospital gave members the time and other resources they needed to participate in the process.
• The education program had already created a climate of good will among team members. This contributed to a sense of trust and an interest in working together further on the evaluation.
• They had an audience who had a demonstrated interest in the program, making it worthwhile for the team to go through the effort of collecting considerable information, analyzing it, and reporting it.
• The team had a good mix of perspectives, including one program participant. All team members seemed willing and able to participate actively.

The process did not produce the kind of quantitative data on program impact which the team felt its primary audience would like. Instead, the evaluation produced less-easily-quantifiable data on impact and focused more on formative feedback on how to improve the program.

The process did take time (three day-long team workshops plus preparation, data-gathering, report-writing, etc. by individuals). This investment of time, however, seemed to produce useful results.

The evaluation produced useful information about the possible formats and content of a workplace education evaluation. It also produced useful information and analysis about one particular program, something rare in the workplace education literature. Team members also developed expertise in various facets of evaluation work, and demonstrated the potential of shared decision-making in the workplace.