

**SYSTEMATIC INSTRUCTION PROCEDURES:  
TRAINING AND MOTIVATING STRATEGIES**

After the information regarding the tasks to be performed by the supported employee has been organized, the facilitator must consider the decisions which will emerge in Phase 6 of the Seven Phase Sequence -- how to augment or provide additional structure to the natural means used in the setting. This requires facilitators to have knowledge of the second major component of effective systematic instruction -- strategies for training and motivating the employee to perform the job. In this chapter, training, that is the communication or interpretation of the information organized by the employer or the facilitator, will be considered separately from motivation, which is the encouragement of employees to perform tasks to the employer=s satisfaction. Data collection will also be addressed for both job task related and behavioral issues.

As the facilitator completes the Job Analysis activity, the natural means used by the setting to communicate natural ways will become increasingly apparent. Job sites utilize a variety of means to teach new employees to perform their jobs. Those means will range from sophisticated and structured, individualized employee training programs to sink or swim@ conditions in which the employee is expected to come to the job with all the skills and experiences necessary for un-supported performance. Job developers must begin the process by asking employers to describe the procedures used to assist new employees to perform their jobs and, when possible, by observing actual training interactions while touring potential job sites.

There are several components of training strategies which facilitators will need in order to offer assistance during Phase Six of the Seven Phase Sequence:

- Formats for presenting information.
- When to offer information to the employee.
- How much assistance should be provided.
- What kinds of assistance should be provided.
- Where to best teach the task.

### **Formats for Organizing Information to Be Trained**

Formats deal with the **amount** of information, obtained from the content task analysis, which a trainer presents to an employee, each time the task is performed. During job analysis, facilitators will discover that most employers begin training new employees by presenting all the steps of a method, each time a task is to be performed. Traditional human service perspectives have assumed that persons with intellectual disabilities, and indeed many persons with other disabilities, were incapable of handling all the steps of job tasks. Therefore, chaining procedures, which presented only one or two steps at a time, became common practice in workshops and, later, on supported employment jobs. While it is true that chaining procedures offer increased opportunities for practice on small components of job tasks, they are rarely used in natural work places. We suggest that facilitators carefully observe, during job analysis, the natural formats used by employers and discuss possible options with natural trainers which might be used to solve information overload problems.

A **Total Task Format** involves the performance of all the steps of the task, each time the job cycle naturally occurs. Unless a work setting has a unique way of presenting information to employees, we recommend that facilitators encourage the use of a total task format during the initial period of employment. If problems occur in training, the facilitator can recommend a number of options:

- a. Move on to clusters or mixed formats, described below;
- b. Use a chaining procedure to tailor the amount of information which is presented to the supported employee; or,
- c. Consider an *easy-to-hard* sequence, if the task lends itself to such a strategy. This approach is particularly useful when clear productivity demands are a part of job performance. An example of an easy-to-hard sequence might be used in an usher job in a theater. The job would be taught with the natural trainer presenting all the steps of the method for taking tickets, while another co-worker or the

facilitator takes up the majority of the tickets. This allows the supported

employee time to receive training without the pressure of high productivity demands.

**Cluster formats** involve the performance of portions of the task which are later chained together to form the total task. Clusters can be used when either the number of steps or the scope of the task proves to be too much for the employee to handle. For tasks which have numerous steps, it is often possible to identify sub-tasks or groups of steps which logically fit together. For instance, the job of cleaning a guest room in a hotel can be divided into the clusters of bed stripping, bed making, vacuuming, dusting, cleaning the bathroom and straightening personal items. It may be possible to negotiate an initial focus on one or two of the sub-tasks for a supported employee who is having difficulty with the total task of cleaning a guest room.

Some tasks have a broad scope which can prove difficult for some employees to handle. In the case of the job of sweeping a warehouse floor, the task may seem overwhelming to the employee. The facilitator can suggest that the warehouse floor be divided into smaller sections. The original total task format can then be employed to teach the employee to clean one section at a time. After one section is complete, subsequent areas can be cleaned in a sequential manner until the entire floor is cleaned. Whether the clusters involve using sub-tasks or a smaller scope, the clusters must be rejoined using a chaining strategy.

**Forward chaining** is the process of presenting the clusters of the task for training purposes in a sequential manner as typically performed in the total task format.

**Backward chaining** is the process of presenting the clusters of the task for training purposes starting with the typically-occurring final cluster first, then proceeding backward toward the first cluster. This approach might be useful when employees need to see the completion of a task in order to receive the information or motivation provided by completing the final steps. We suggest that facilitators recommend backward chaining only after first trying a forward chaining approach.

**Mixed Formats** are used in training situations which begin using Total Task or Cluster formats, then require that a step or cluster of steps be "pulled-out" and taught using Amassed trials -- teaching the target step(s) over and over, without delay between performance of the

steps. The steps or clusters are later plugged back into the original format as the employee gains proficiency with that part of the task.

Massed-trial presentation of selected steps or clusters is usually artificial to the natural cycle and therefore should usually be considered in Phase 6, Amend or Structure Natural Means, of the Seven Phase Sequence. This strategy can be effective in focusing attention on a targeted problem area. Massed trial training usually must be negotiated in employment settings. There are a number of alternatives for increasing the opportunity to practice problem steps using mass trial training which can be implemented by the facilitator. A general rule of thumb for implementing mass trial training is that there is always a cost to pay for this decision. Facilitators must carefully consider both the potential gains in training power and the costs in the areas of logistics, motivation, confusion and artificialness. A listing of potential strategies and costs are described below:

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|-----------------|----|--|
| <b>Strategy</b> | 1. | Stop the natural method at the point the problem step(s) occur or when the task is complete and practice the problem step for a number of trials.  |
| <b>Cost</b>     |    | This approach can lower production, cause confusion on the part of the employee as to the natural sequence and cause confusion to other employees in the area.   |
| <b>Strategy</b> | 2. | Use lunch or break times to practice problem steps.  |
| <b>Cost</b>     |    | This strategy can cause motivational problems due to the employee missing rest and eating times, it may be illegal or improper in relation to labor laws or agreements, other employees may not understand.  |
| <b>Strategy</b> | 3. | Come in before the shift or stay after the shift and practice problem steps.   |
| <b>Cost</b>     |    | This approach will likely cause transportation problems for the employee. It may be necessary to pay both the employee and the facilitator for the additional time. The task may not be available for practice due to performance by others. The setting may be closed. The facilitator=s schedule has to be re-arranged. The employee may not be motivated to work before or after the shift. |

**Strategy**      4.      When feasible, take the task home/school or replicate the task at home/school and practice the problem step(s).

**Cost**                      It is not typically possible to take a task from work or to accurately replicate the task in another setting. There is liability for any item taken from a work place. The parts or devices may be needed at the work place and cannot be taken off site. Significant motivational problems can develop when employees must perform work at home.

Even considering these costs, it is often necessary to find opportunities for increased practice for difficult steps on job tasks. Facilitators are encouraged to engage employers in determining solutions which best fit each individual work setting and employee. Also, keep in mind that changing formats is only one of a number of strategies which facilitators can use to address problem steps of a task. Additional strategies for modifying or adapting the method, improving training assists and breaking down content steps are discussed elsewhere in these two chapters on systematic instruction.

**Sequential Role Play** involves using artificial approximations of a natural situation, which are presented in an easy-to hard format. This format is used for skills which cannot be taught in the natural environment. This approach, described by Marc Gold (1980) as *Organized Exposure with Feedback*, might be used for the tasks *How to avoid a difficult co-worker* or *Dealing with work site teasing*. When the facilitator or natural trainer is with the employee in the situations in which the above problems typically occur, they usually do not occur. They often arise as issues only when assisting persons are not around. Therefore it is necessary to practice the method of the task, using one of the formats suggested above, in a simulated environment, until the employee is able to successfully perform the task. Facilitators must identify a simulated environment, as close to the natural conditions a possible, which can be handled by the employee. After allowing sufficient opportunity for practice and confidence building, increasingly natural simulations can be provided until the employee is felt to be able to handle the real life situation. By using this format carefully, facilitators can use systematic instruction procedures to assist employees to deal with some of the most difficult interactional

issues which will arise on job sites.

### **Using Systematic Instruction Strategies: A Juggling Act**

After trainers have prepared themselves to teach by observing and memorizing the method, breaking the task into natural content steps and selecting the format for presenting the information, the time has come for communicating the image of correct performance to the employee. Effective communication, which results in topographically correct performance of the steps of the method, is challenging and somewhat like a juggling act. Trainers must consider a number of factors simultaneously. Decisions must be made as to when information is to be provided, how much information will be offered and what kind of information will best convey the method. Additionally, trainers must consider the best place to teach the task, remember the method of the task, deal with the employee=s motivation and behavior and screen out any distractions which may exist in the work setting.

As facilitators consider Phase Two of the Seven Phase Sequence, Natural Means, it is likely that most work settings will not focus on the process or method of job tasks performed by employees, but rather, on the outcome of the task. This difference of focus requires facilitators to decide whether, and if so, when to offer training information to the person assigned by the employer to teach job tasks to the supported employee. The Seven Phase Sequence encourages the natural person who typically teaches the job tasks to begin the initial training of supported employees using the natural means used in the setting. Then if problems arise, trainers can suggest ways to focus on all the factors which impact successful communication of information in Phase Six.

This chapter targets the training issues of **when** information should be offered, **how much** ownership is required of the employee, **what kind** of information will be provided and **where** to best provide instruction. Each of these factors must occur simultaneously and, as training progresses towards criterion, the responses by the trainer will change. **WHEN TO PROVIDE INFORMATION**

This factor requires trainers to consider when it is best to offer information to an employee. As we have suggested throughout this text, a trainer=s initial decision should always

be influenced by the natural means used in each work setting. Most work places will offer new employees, or current employees learning new jobs, information **before** any performance occurs. This information is often in the form of lengthy explanations or demonstrations of the job by an experienced employee or supervisor. Typically, trainers in community work places will then wait until **after** a new employee performs the task to provide feedback on any errors which were made. In fact, it is common for trainers and supervisors to leave new employees in many settings after the **before** information has been provided. After a short period of performance has passed, the trainer might return for critique and to answer questions from the employee. It is important to realize, however, that the means used by community work settings to teach new employees will vary widely. The information provided in this chapter will offer facilitators strategies for analyzing the training naturally provided to employees and for suggesting more effective means for communicating information as problems occur.

### **Information provided before employee action**

Systematic instruction procedures which have evolved from the strategies developed by Marc Gold (1980) also rely on information delivered **before** learner action. The difference between systematic procedures and many natural means used in community work settings is that with systematic instruction the facilitator recognizes the role which antecedent information plays in communicating correct performance. Information which is provided before the employee begins performance lays the groundwork for the topographical correctness desired in the setting. A critical assumption in systematic instruction is that correct performance will not occur without clear information provided before employee action. Job tasks are not like sand castles which can be built to the whim of each person on the beach. Rather, job tasks reflect the culture and demands of each setting and result from specific decisions made by employees or by tradition practiced over long periods. Facilitators can use systematic instruction strategies to suggest that employers carefully consider the need for accurate and usable information to be available before employees begin to perform their job tasks.

### **Information provided during employee action**

Natural training strategies rarely take advantage of the performance of a task as a time for

offering information for correctness. Perhaps it is because many work places follow the adage, "It's necessary to make mistakes in order to learn." This perspective encourages trainers to allow time for errors and to use training strategies after employee performance to correct the mistakes. However, as with many adages, this approach to training can cause problems for new employees, especially for employees with disabilities who find it difficult to learn tasks.

Rather than viewing the opportunity to make mistakes as a condition of learning, it more helpful to offer employees the opportunity to **make decisions**. Each content step of the method offers learners the chance to decide upon the correct action to be performed. Trainers can wait to offer information until **after** a decision has been made by the employee, but **before** the decision is acted upon. This strategy is referred to as **Timing** (Gold, 1980). By using timing, trainers can allow employees to make the decisions necessary for acquisition and, at the same time, avoid the problems associated with waiting until incorrect decisions have been acted upon. When trainers wait until the action is completed to offer information, several problems arise:

1. Cycle constancy can be compromised. When employees are allowed to complete incorrect actions there is the possibility of a **learning effect** associated with the incorrect rather than the correct actions.
2. Safety concerns are raised. It is simply not ethical to allow an employee to encounter the negative consequence of an injury in order to perform and learn a task.
3. Assists offered after an error has occurred are often in the form of critique rather than information for correct action. This can cause some employees to feel reluctant about training.
4. Continual checking of errors after performance can result in a dependency being formed with the trainer by the employee. Rather than viewing the trainer as a provider of information it is possible that the role will be seen as offering constant approval for all aspects of performance.

The use of timing is not without cost, however. It is important to realize that timing is



not likely to be a feature of most natural means. Therefore, facilitators should typically consider suggesting the use of timing in Phase Six, Amend or Structure Natural Means. The conditions necessary for using timing are as follows:

1. The trainer must be present during the performance of the task.
2. The trainer must carefully observe the performance of each step of the task and be in a position to intervene with information after an incorrect decision has been made but before it has been acted upon.
3. The trainer should utilize a ANo news is good news A strategy (Gold, 1980) in relation to the trainer's reaction to the steps of the task performed correctly. This approach allows employees to understand that they are performing correctly when the trainer is silent. In this manner, fading is built into training and the chances for a dependency relationship are lessened.
4. The trainer should offer information for correctness when assisting the employee rather than critique. This allows the employee to view the trainer in a more positive light.

### **Information provided after employee action**

As facilitators observe natural means used in teaching employees, they will often notice training personnel focusing on the correction of the errors. This focus is a typical practice of most natural trainers. As described above, powerful systematic instruction procedures tend to avoid the need for correction of errors for a number of important reasons. One reason that correction and information naturally occurs **after** employee action is that it is expensive to have a trainer observe an employee throughout the acquisition phase of a task. We recommend that when businesses use this strategy, facilitators should wait to intervene with suggestions until after problems occur, unless there are safety or behavioral concerns relating to the supported employee. However, the decision to suggest a change in this area should not be delayed for too long. It is possible for the supported employee and the natural trainer to get frustrated and uncertain about the performance of the task if the teaching strategy continues to focus on correction of errors after performance. It may be necessary for the facilitator to demonstrate

timing to the employer or even to substitute for the natural trainer if the issue of information versus correction begins to cast doubt on the supported employee=s job performance.

Of course, not all correction is problematic. Errors will occur outside the opportunity of a trainer to provide correction by using timing procedures. And, as stated earlier, error correction after employee action is likely to be natural in most work settings. When observing natural trainers and supported employees, facilitators should look for signs of frustration by either party. If the correction is provided respectfully and is taken well, it is recommended that the facilitator take no action. If an uncomfortable atmosphere begins to emerge however, steps must be taken to avoid problems. Facilitators might recommend the following strategies to trainers for correcting errors after employee performance:

1. Try to focus on information for correction rather than simply on critique.
2. Recognize that correction of errors after action might cause a lack of confidence in supported employees.
3. Start the correction by asking the employee to critique his/her own performance.
4. Suggest that continuing error correction after employee performance is an indicator that timing is probably needed.

If the trainer is trying to use timing, but misses an error, correction must be made after employee action. This can be particularly confusing since the bargain struck when using the strategy of *Ano news is good news* is that silence is an indicator of correct performance. It is therefore necessary for the trainer to tread carefully when the timing of the correction of employee errors is missed. The easiest way to resolve the confusion is for the trainer to assume responsibility for the error in timing. The following three steps are recommended in case of trainer error when using timing.

1. Apologize to the employee for the trainer=s lapse of concentration.
2. Correct the error at the point at which it was made, rather than at the point at which it was identified. This may require the trainer to reset the task back to the point of the error and perform the steps correctly up to the point the error was caught.

3. Point out the natural features of correctness on the step which the employee should have referenced for correctness.

The above strategy is particularly useful, perhaps even necessary, for supported employees who do not seem to take correction of errors well and who may respond with inappropriate behavior. It is also recommended for people who have low self-esteem or those who are unsure of their ability to complete tasks correctly. Of course, all people appreciate respectful treatment when others do not hold up their end of a bargain.

### **Self-Correction**

There are situations in which a trainer will choose to not use timing, even with employees who seem to require this strategy. As an employee begins to reach criterion on a given task, the trainer will typically need to determine if the employee can catch errors on certain steps, without assistance from the trainer. Since the use of timing requires the trainer to correct an error before it is acted upon, this creates a challenge. The solution is to use a self-correction strategy. When using this approach, the trainer allows the learner to make an error, in the hope that the learner will catch the error and learn from the experience. Self-correction meets the concerns of some trainers who worry that the use of timing will not allow for the opportunity for employees to identify the characteristics of an error since the approach focuses solely on correct performance. When considering self-correction as a teaching strategy, trainers should follow these guidelines:

1. Self-correction is used only when the trainer feels that more can be learned by making an error than by having it corrected with timing (Gold, 1980). This implies that the employee has had sufficient information for correctness and the opportunity for consistent practice of the task -- in other words the employee needs to be familiar with the task.
2. Offer naturally appropriate feedback and reinforcement for the employee=s correct decision and explain that it is permissible for the employee to correct errors without the trainer=s assistance or permission.
3. If the employee does not catch the error and correct it, the decision was trainer=s error not to use timing. Therefore, use the strategy described above for correcting

a trainer=s error.

## **KINDS OF INSTRUCTIONAL ASSISTS**

Instructional assists are means of giving information about the method or outcome of a job task. Instructional assists may be used to offer information as to the correct action to be performed, to reference natural cues which provide information for correctness or to correct errors made during performance. Frequently- used instructional assists found in natural settings

- Demonstration
- Verbal Information
- Physical Assists
- Gestures
- Modeling
- Side-by-Side Performance

Other natural means used for instruction of new employees

- Written Procedures
- Photographs
- Video Tape
- Slide Shows
- Adaptations
- Lecture/General Explanations

## **Demonstration**

Possibly the most common strategy for providing information before employees begin a new job task is to have the trainer demonstrate the method of the task to the new employee. Demonstration allows the trainer to perform the steps of the task the in the manner the employer wants -- in other words, with topographical correctness. This approach requires the trainer to carefully follow the acceptable method and it requires the employee to carefully observe the performance.

Even though demonstration is commonly used in community work settings as an

instructional strategy, it is not a powerful assist for most individuals. It can be useful in providing general information to the employee as to what the job task looks like. Demonstration is not, however, an effective strategy for communicating specific information on complex steps of a task. To be effective, the demonstration of the task must be observed by the learner. If the learner is not paying attention, as might happen with some persons who have issues relating to their behavior or interest in tasks, the demonstration is not likely to be very informative. In that case the trainer should consider another type of instructional assist.

Demonstration are useful, however. They can be particularly effective in showing the pace of work to an employee. Demonstration also provides a general picture of what the employee is expected to do. Most people prefer that they first see a task before they are willing to perform it. Demonstration also can help break the ice between natural trainers and supported employees. Since the trainer knows the task better than the new employee, it's a more comfortable place to get started.

The length of a demonstration is an issue for any new employee, especially for supported employees. No one wants to stand and watch someone else perform a job for very long. Since demonstration does not involve the performance of the new employee, longer observations do not result in better information for performance. If it is natural for new employees in a setting to watch an experienced employee work for an extended period, the facilitator should carefully monitor the supported employee's behavior and interest. If a problem begins to occur, the facilitator should move to Phase Six and suggest that a different assist be used.

### **Verbal Information**

Verbal assists include any spoken or signed instructions to an employee for the purpose of communicating information about the performance of a job task or other job related behavior. Along with demonstration, verbal assists are certainly the most commonly used of all the teaching cues found in community job settings. These assists are useful in providing information before employee performance, during action when using timing and following the completion of the task or action as critique, information or reinforcement. Spoken information allows the

trainer to specifically explain the details of a step to an employee and also to general describe the bigger picture of the way the task fits into the needs and culture of the company.

Verbal assists are particularly useful for teaching order and discrimination steps, but are not typically effective in teaching manipulation skills. This limitation exists due to the complexity of manipulation of dynamic steps, many of which require judgement and consistent practice to reach criterion. In order to be effective communicators of discrete information, verbal assists must be succinct, clear and sharply focused on the step to be taught. Trainers should plan verbal assists for each step of a method, considering information-packed phrases early in teaching and clear, but longer, descriptive sentences as training progresses towards criterion. Facilitators must closely observe whether natural trainers are overwhelming supported employees with verbal information and be prepared to recommend more useful cues.

Information overload is a common problem when using verbal assists. Trainers regularly use language during most all their daily interactions -- both at work and at home. Most of these interactions are in the form of **conversation**. Conversation is the general use of language to communicate feelings, experiences, needs and other issues. Trainers, on the other hand, often need to provide specific **information** on task performance. Information involves the specific use of language to communicate discrete and usable words which can be turned into correct performance by the employee. Information is like a crystal clear view of a landscape. Conversation is like a fog which creeps into the view and obscures the fine lines of detail and color. A common mistake of trainers is that they often allow conversation to cloud the information which was to be communicated.

Trainers, therefore, should allow a pause to occur between one verbal assist and the next to allow the employee to utilize the information. If the employee has difficulty, reduce the amount of verbal information in the assist. Some learners will require verbal assists of no more than one word at a time early in training. If natural trainers seem to use extensive verbal during the job analysis, keep a close watch during the initial hours of training on the first day of work. If the trainer's style does not change or if the employee seems to be struggling with the amount of information being communicated, facilitators should consider intervening with suggestions in

Phase Six of the Seven Phase Sequence. For some learners it may be necessary to distinguish verbal information from routine conversation. The trainer can do this by the tone used to convey the information and by the amount of information included in a verbal interaction.

There are other subtle but important problems which can arise when using verbal assists. Gold (1977) warned trainers that when trainers used spoken information, employees are more likely to shift their attention from the task to the trainer, out of respect or teaching-induced habit. This may create a problem for supported employees who have difficulty staying focused on the task. It is possible that some employees may find the trainer more reinforcing than the task. By overusing verbal assists, trainers can create a significant distraction to the performance. Trainers must also be careful not to distract employee with verbal assists when safety is an issue.

**Non-verbal training?**

Marc Gold often characterized his approach to teaching as "essentially non-verbal" (1976). For years during the late 70's and early 80's, human service trainers followed that trend and utilized training strategies which silenced the trainer. While there continues to be a rationale for considering the individualized and episodic use of non-verbal teaching, we no longer encourage trainers to minimize the use of language in teaching. The most overpowering reason is that silent teaching is almost never found in natural work places. The arbitrary use of this strategy would require natural trainers to change their means of teaching, without first verifying the need for such a change. Secondly, it is likely that the natural motivation provided by well matched supported employment jobs will overcome the likelihood of the distraction so common in segregated settings. Finally, we may discover that supported employees can learn effectively from verbal assists. By starting naturally, we might avoid the need to use this artificial approach.

At this time, we recommend that facilitators consider the costs and benefits of verbal information and carefully monitor the result of teaching using this strategy. It is much better to control this common and natural strategy than to eliminate from our "bag of tricks". However, it is equally important to remember that some employees may benefit from a teaching strategy which minimizes verbal interaction at certain times during acquisition and performance. Facilitators can use the Seven Phase Sequence to amend or structure the natural teaching means

in order to control or minimize the use of verbal assists as required by the employee.

**Gestures/Modeling Assists**

Gestures and modeling assists will be considered together in this section, even though they contain different kinds of information. They are similar in that both assists involve the use of the trainer's hands or other body parts to reference or simulate desired relating to a job task. Gestures involve information provided by the trainer, primarily using pointing or other general hand signs, which directs the employee's attention to a certain aspect of the task. Often, by the trainer simply pointing at a relevant feature of the task, an employee can figure out the correct action to take.

Modeling assists also involve bodily action, typically with the trainer's hands, which simulate the action an employee should make for correct performance. For instance, a trainer might model the action of smoothing a sheet before it is folded in a laundry. The modeling assist would be given in the same area as employee performance and should follow the topographically correct performance as required by the employer. In the same job, a gesture might be given by the trainer to point out the hem of the sheet or another feature of the task. Modeling assists differ from demonstration in that in a demonstration the trainer actually performs the task. When modeling, the trainer simulates the correct movement while the employee continues to perform the task.

Gestures/modeling assists can effectively communicate information without the use of language or touching. Trainers can simply point to an object or direction which represents the correct action. Gestures are also useful for referencing natural cues. These assists are particularly useful in noisy work settings and also for employees who may be easily distracted by an over use of verbal information. Gestural/modeling assists also allow employees to keep their attention on the task, rather than on the trainer. The natural response to a point is to follow it with our eyes to the target. These assists also can be useful for teaching employees who do not understand the language of the trainer or who are not able to interpret verbal assists into action. Finally, gestural/modeling assists allow the trainer to require much more of the employee, and



therefore, fade from training more quickly.

Instructional power can be easily controlled with gestures by moving the gesture further and further back from the task and with modeling assists by allowing the simulated action to become more and more subtle.

### **Physical Assists**

Physical assists involve the trainer touching the employee for the purpose of communicating information for correctness. Most physical assists are in the form of the trainer's hand(s) assisting or supporting the employee's fingers, hands, wrists or arms. It is also possible to offer assistance by touching an employee's shoulder, back, leg or head. These assists became popular in the human service field during the seventies and early eighties as researchers such as Gold, Bellamy, Wehman and others considered ways of communicating complex manipulations to persons with severe intellectual disabilities who were in settings such as workshops and group homes. However, as job trainers began to observe the natural training styles of supervisors and co-workers, it became clear that physical assists were rarely used between people in community work settings. The impact of this observation seemed to cause job trainers and supported employment providers in general to reduce the emphasis on physical assistance as a strategy for providing information. We feel that, to the degree that it happened, this is unfortunate. Physical assists are often the only reliable means of communicating complex manipulations to persons who find it difficult to learn. Even though physical assists can be heavy-handed and rarely used, facilitators can closely monitor, and model as necessary, the use of these assists in natural work places.

An interesting finding which also encourages the acceptance of physical assists has been identified during two years of training based research performed during staff training by Callahan (1995, in preparation). In this research, human service participants in technical assistance training workshops perform a job analysis in a company in the community, observing the natural means used to teach a lead participant a supported employment task. Observation by participants have rarely noted the use of physical assists by natural trainers. The trainers are given no instruction on systematic teaching strategies or information concerning the impact of

the supported employee's disability. When the supported employee arrives at the company for a simulation of the first day of employment, the natural trainer begins teaching the tasks in the manner used to teach any new employee. The participants have consistently noted the appropriate use of physical assists during these sessions. One possible hypothesis of this behavior by natural trainers is that when a new employee requires more assistance to learn a task, more is provided. The rarity of the use of this form of assist may simply confirm that many community work settings have not had the opportunity to teach and support persons who may require physical assists to learn certain steps or tasks.

Physical assists are often effective on manipulation steps of tasks and when safety is an issue. Even when used naturally in the work setting, trainers should use physical assists only when necessary. Be gentle and responsive to employees' needs and their reactions to the assist. Trainers can never teach against resistance -- only with cooperation from the learner. Never force an employee to accept physical assistance. Fading is accomplished by requiring the employee to own more and more of the step. Strategies which involve the trainer standing behind the employee and reaching around, whether the employee is standing or sitting, should be avoided. At worst, this can evoke imagery of a lecherous golf pro reaching around a student. Even in the best of circumstances, this strategy implies overbearing control by the trainer.

### **Side-by-Side Performance**

This instructional strategy has been derived directly from the natural teaching approaches used in many community work places. Side-by-side performance combines a demonstration assist by the trainer with simultaneous performance by the employee. The demonstration of trainer can also be paired with any of the other instructional assists described above. The trainer performs the job task while watching the performance of the employee. Even though timing is possible, it is made more difficult because of the necessity for the trainer to halt performance before offering an assist.

This assist offers several advantages to trainers. First, since it is a very common approach, it will feel natural to trainers and co-workers. Additionally, side-by-side performance allows the trainer the opportunity to model both the pace of the task and complex manipulations

during the employee's performance. This assist also allows trainers and co-workers to continue to produce while teaching. However, facilitators must realize that this strategy tends to result in less attention being paid to the supported employee, due the necessity of trainers to attend to their own work. It is easy for trainers to become involved in the routine of performance and miss errors made by the employee. Employees who require close attention from the trainer for correctness and timing of assists during performance, might experience problems with this approach. For employees who are experiencing significant difficulty benefiting from this assist, the facilitator and the trainer can work as a team, with one person demonstrating the task with side-by-side performance and the other offering other instructional assists using timing.

**Instructional assists which do not require a trainer**

There are a number of means available to employers and facilitators for communicating information on task performance which do not require the direct interaction with a trainer. There is a legitimate argument as to whether these approaches comprise "training strategies" or whether they are "instructional aides". A listing of commonly used option for providing information, without the presence of a trainer includes:

- ! Adaptations
- ! Written Procedures
- ! Photographs
- ! Video Tape
- ! Slide Presentations
- ! Lecture

Certainly the most common factor that these strategies share is the assumption that information on correctness can be communicated to employees without the presence (and therefore the expense) of a trainer. Therefore, these procedures are fairly common in many community businesses. The flip side of not requiring a trainer's presence is that the employee has the primary responsibility of translating the information into correct action. For this reason, facilitators must carefully monitor the effectiveness of these trainerless approaches for supported

employees. It is recommended that initial training begin by referencing whatever means are typically used for other employees to acquire information on their jobs. If problems occur, facilitators must move quickly to Phase Six of the Seven Phase Sequence to resolve any confusion or misinterpretation by the employee.

Except for adaptations, these approaches share a common flaw from the perspective of powerful systematic instruction. In an effort to save money, companies often try to get two outcomes for the price of one. In this case, employers hope that the organization of the information to be performed will double as the training strategy. This is effective in some cases. Carefully developed procedures can be used by skilled employees to produce correct performance. However, the requirements implicit in these procedures -- reading, generalization, comprehension -- are often the areas with which many persons with intellectual disabilities have difficulties. Facilitators are encouraged to consider ways to amend the general procedures to meet individual needs, if supported employees experience problems.

### **Adaptations**

Adaptations deserve special attention in the area of training. While they fall into the area of "trainerless" procedures, adaptations are much more specific to individual problem steps and can be tailored to meet individual employee needs.

### **HOW MUCH INFORMATION SHOULD BE PROVIDED**

In addition to **when** information is to be provided to the employee and **what kind** of information should be provided, the trainer must juggle the issue of **how much** information to offer. Since this is less concrete than the other concepts, it is often misunderstood by trainers. One way to think about how much information should be provided is to think in terms of **Ownership**. Any step of a task requires ownership of the decisions and actions necessary for correctness. After criterion, the ownership of the task will typically rest completely with the supported employee. However, during training, the decisions and actions necessary for correct performance are shared between the trainer and the employee. Early in training, for instance during a demonstration, the ownership lies mostly with the trainer as the employee is responsible only for observing the task. As the training progresses, the ownership of the various steps of the

task begins to slowly shift towards the employee. The term which is typically associated with this shift in ownership is **fading**.

**Fading** involves purposefully diminishing the power of instructional assists as the employee acquires more and more information about the task and the relevant natural cues. A trainer has successfully faded when the employee no longer depends on the trainer for the acceptable performance of a job task. Successful fading can involve the on-going assistance by a person in the natural setting, if such assistance is critical to the supported employee having access to a task. For instance, a supported employee who worked in a restaurant had to remember to clean the filter on the dishwasher every three days. Since the task was difficult to remember due the time delay between cycles, a co-worker always helped Anthony remember the first step. However, facilitators should strive to assure that tasks are owned as completely as possible by the employee, especially for core routines.

Fading of instructional cues is essential to the independent performance of a task, even those used by natural trainers. Some instructional cues, such as adaptations, may be picked up by the setting, if used regularly by natural supporters. In these cases the facilitators must insure that the assist is either faded completely or, if not possible, is agreed to and understood by the employer.

The strength of an assist is an important consideration for fading. The relative strength of the various instructional assists -- the degree of effectiveness in communicating useful information -- differs from person to person. Some people respond well to verbal assists while others may prefer repeated demonstrations. Additionally, different steps of a task lend themselves to differing assists. For instance, an order step -- knowing what to do next -- can often be communicated with a simple gesture or short verbal assist. Discrimination steps, those that require the employee to distinguish the correct orientation, position or quality of a step, can be usually be taught with verbal assists, modeling or side-by-side performance with the trainer. Manipulation steps require the employee to use dynamic movements while interacting with the task. These steps need to be performed consistently and may require brief physical assists by the trainer for correct body position and hand placement on the task.

Experienced trainers experiment with assists and the various types of steps so they can better anticipate the best assist for each step of a task. By doing this, it will become possible to select the assist which provides sufficient information for quality performance and, at the same time, allows maximum ownership of the step by the employee. Therefore, facilitators should encourage natural trainers to use a variety of assists in order to determine which assists meet this balance.

### **Strength of Assists and Assist Hierarchies**

In the early 1980's, Marc Gold (1980) and other researchers who studied the strategies and impact of systematic instruction for persons with disabilities suggested that instructional assists existed in a hierarchy in relation to their strength or power. A classic ordering was offered by Gold (1980) in his Hierarchy of Assists in which he suggested that physical assists were the most powerful and therefore the first to be faded. Next came gestural assists followed by verbal information. While there may have been logical, and perhaps even some research-based, reasons to develop a hierarchy, the potential for misuse outweighs any benefit. Trainers often considered the hierarchies as dogma to be followed rather than as indicators of a general phenomenon. This led to a perception that all training, and the accompanying data collection, had to begin with physical assists, fade to gestural assists and culminate with verbal assists prior to criterion.

We no longer suggest that facilitators follow an assist hierarchy when planning and fading the instructional assists to be used on job sites. Rather, it makes more sense to focus on increasing the ownership of the various steps of the task by the employee, with whatever assists that seem to be effective. Trainers can then have access to the entire range of instructional assists (see following section). However, within each type of assist, the trainer can give less and less specific information, requiring more and more ownership, as the learner approaches criterion. In this way, fading can continue to be systematically achieved.

### **Choosing assists to initiate training: A least power@ approach**

Based on the preceding discussion, it is recommended that trainers begin teaching by using the instructional assists typically used in the setting, at the power or strength level offered

to other employees. If this amount of power is not sufficient, the facilitator should consider in Phase Six -- Amend or Structure Natural Means -- recommending assists with sufficient strength to effectively communicate the information. This suggestion is usually an educated guess based on a least power perspective. That is the facilitator tries to estimate the amount of power necessary to communicate correctness, but no more. If the assist does not result in correct performance, power can then be increased with the subsequent assists, by requiring less and less ownership of the employee, until correct performance is communicated.

**WHERE TO BEST PROVIDE INSTRUCTION**

The issue of trainer position may at first glance seem straight forward -- trainers need to be close enough to the employee to provide information and to intervene with timing. However, with the changes which are occurring in the shift of roles between human service job facilitators and natural trainers, the issue becomes more complex. Therefore, this section will first address the question of trainer position in relation to the employee and then discuss options for facilitators who may be observing the teaching interaction between supported employees and natural trainers.

**Trainer position**

The location of a trainer to the employee will vary as the different types of job tasks vary. Some job tasks are performed standing, in front of a machine. Others are performed standing, while moving about a work area. Office jobs are often performed in a sitting position, with brief periods of standing. The variety and uniqueness of employee positions are numerous. Trainers, whether natural or human service, must consider the best position from which to offer information. Decisions must be made concerning which side is best to teach from, if information can be offered from in front of the employee, and if there is sufficient room for a trainer in the work area. Since many errors occur early in training, it is necessary for the trainer to assume a position close to the employee in order to catch errors as they happen. The gradations of closeness are subtle, however. If the trainer moves too close, the training interaction will seem unusual. This hovering can be uncomfortable to the employee. It can also create dependence on the trainer if the position is maintained throughout the duration of the training.

On the other hand, a removed training position can also create problems. The further away the trainer moves from the performance, the more difficult it is to intervene with information on correctness using the timing strategy. We recommend that trainers position themselves close to the employee, standing or sitting, in the same manner as the employee. Trainers can then use the various steps of the task to anticipate whether there is a need to move closer or if it is possible to ease away from the task a bit. Since the trainer will quickly know the more difficult steps of a task, these decisions can provide a fairly accurate guess as to the need for closeness.

Generally, trainers should assume the same position, standing or seated, as the employee. When working with employee who use wheelchairs for mobility, this is particularly important for creating a balanced relationship. Some tasks will not allow for the trainer to assume the same position as the employer. For instance, when teaching an employee to change a light bulb while standing on a step stool, the trainer may feel that it is best to remain on the floor to help in case of a problem. Trainers should try to avoid standing behind an employee and reaching around to provide information. This position is uncomfortable to most employee, it seems unusual in natural work places and it send an image of dependence to others in the setting. Trainers can usually find an alternative way of teaching a step by moving to the employee=s side or front.

### **Fading trainer position**

As training progress from the initial days of performance towards criterion, the position of the trainers can also change. As the employee acquires more and more of the task, trainers can afford to move away from close contact to an observation position in the general work area. As we have noted earlier in this section, the close position of the trainer during training can result in a dependent relationship to be formed between supported employees and their trainers. This is understandable since many supported employees have previously been in settings which fostered dependence by surrounding them with protective supports. If trainers in work places continue this relationship by staying too close during training, they will find it extremely difficult to fade.

The lesson in this observation is that trainers must consider ways to fade their position, as well as the strength of their assists. Take every opportunity to back away from employees as



soon as their performance warrants. As employees reach criterion, trainers should be positioned well away from the task. For employees who seem to need the presence of the trainer during performance, a graduated fading strategy must be implemented. A supported employee in a restaurant in Syracuse, NY, required a two week strategy of gradual fading of the trainer's position in order to feel comfortable enough to work alone. If the trainer had simply left the work area upon criterion, it is likely that the employee would have lost his job.

### **Facilitator position**

The evolving role of human service supporters has caused a reconsideration of the position of these people in work places which now may utilize natural trainers for much of the teaching provided to supported employees. If a co-worker, trainer or supervisor from the company is providing instruction, facilitators must decide on the best location from which to observe the training interactions. Even though work settings vary greatly, it is usually possible for the facilitator to find a location which will allow for unobtrusive observation. If the facilitator feels that the introduction and initial interactions of the supported employee and the natural trainer has been smooth, it is possible to find a comfortable space from which to watch the training. If it is felt that the employee might require immediate Phase 5, 6 or 7 decisions, the facilitator should stand close to the training in order to offer assistance.

It is also likely that, initially, the roles of trainer and facilitator will be confusing to all parties. The training-based research (Callahan, in preparation) referenced earlier in this chapter indicates that if the facilitator is too close to the training, the natural trainer will tend to back off and allow the facilitator to take over. The give and take between trainers and facilitators continues to evolve as more jobs are developed which reference natural features of support. Facilitators are encouraged to give as much attention to their relationship with trainers as they traditionally gave to planning and delivering training strategies.

### **MOTIVATING AND REINFORCING STRATEGIES**

*"How can we expect people to take their places next to us in society if so many of the ways we use to help them get there force them to recognize their subservient position?" Gold (1977)*

The concepts of motivation and reinforcement have confused and pre-occupied the human service field for years. Most traditional training approaches seem to depend upon these concepts for their primary sources of training power (Gold, 1977). Although this text does not attempt to describe behavioral interventions or the use of reinforcement procedures, it is important to relate the issues of motivation and reinforcement to the success of supported employees in natural community work settings. It is necessary, therefore, to distinguish these concepts which are often used synonymously.

**Motivation** can be described as all the naturally existing features of a work site that promote desire, initiative, cooperation, enthusiasm and other desired behaviors on the part of employees of the setting.

**Reinforcement** is the purposeful arrangement of events -- by employers or human service supporters -- that occur after a desired behavior in a work setting, arranged in such a manner to increase the likelihood that the behavior will occur again.

These definitions have been adapted from the early perspectives of Marc Gold (1980) to reflect the role of motivation and reinforcement in community employment sites. In the system of instruction presented in this text, reinforcement is considered a subset of motivation.

Motivation is a critical natural feature of all employment sites. Just as with natural styles of informing, the forms of motivation used by companies vary widely. The Seven Phase Sequence asks facilitators to identify the ways in which companies naturally motivate employees and then reference and utilize those strategies in training and later in Phase 6, as necessary.

**The role of ANo news is good news@**

It often seems that human service trainers must pass a pre-employment test in which they have to prove their ability to say Agood job@ after every instance of a supported employee=s successful performance. Whether it is because of some innate trait or a sense of collective guilt which we share in relation to our expectations for persons with disabilities, job trainers find it very difficult to allow an unassisted action to pass without comment. Gold (1977) closely examined the impact of this constant reinforcing and felt that it bred dependency more than it

facilitated success. In fact he accused trainers of needing to give constant reinforcement more than the people who received it (Gold, 1982).

Gold's response to continual and arbitrary reinforcement was to suggest that the best reinforcers are those found in the natural environment (1977). With this perspective, Gold was in line with the Seven Phase Sequence presented in this text ten years before it was conceptualized. However, since many persons with disabilities have spent major portions of their lives in settings which effectively addicted them to habitual reinforcement procedures, an intentional strategy to replace these responses had to be developed. For that purpose, Gold suggested that correct performance should be rewarded with silence, along with the trainer's close attention to all aspects of the learner's performance. Gold called this approach, "No news is good news".

"No news is good news" acknowledges correct performance and, at the same time, allows the trainer to become less and less a part of an employee's success. This approach strikes a deal with a learner in that information will be offered if an error is made -- and in a way that is respectful and helpful. This allows the learner to operate on "internal feedback" for acknowledgment for correctness. This also happens to be the exact same condition for reinforcement which is natural to most community work places.

Of course, all persons need encouragement and motivation to continue to perform quality work. For this reason facilitators should seek to insure that all the natural motivating features of the work place are available to the employee. Additionally, there is certainly nothing wrong with praise and encouragement from the facilitator, as long as it does not create dependency. We recommend that facilitators begin training with whatever motivators and reinforcers are natural to the setting. If problems occur with the employee's motivation to work, increase power by following the suggestions described below.

### **Using reinforcers in a natural setting**

The use natural of formal, systematic strategies for reinforcement is rare in community

employment settings. Therefore, trainers need to utilize an approach which starts with the most natural strategies and only employs more artificial measures if absolutely necessary. The following steps describe a natural to artificial approach for utilizing reinforcers in community job sites.

1. Use **Natural Reinforcers** at a **Natural Rate**.
2. Use **Natural Reinforcers** at an **Artificial Rate**.
3. Use **Artificial Reinforcers** at a **Natural Rate**.
4. Use **Artificial Reinforcers** at an **Artificial Rate**.

To **increase power**, as in Phase 6 decisions, move from # 1 through to # 4, in order, adding additional steps only as necessary. To **fade**, move from the last step that worked back to Step 1.

### **EXAMPLES**

1. A job trainer observes the natural procedures of an employment setting during Job Analysis and plans to incorporate and reference these procedures during training and orientation of the new employee. This company utilizes a short pep talk by the supervisor for a team of employees at the end of each day. The trainer ensures that the sessions are attended by the supported employee and spends additional time pointing out the purpose and importance of the meetings to the employee.
2. A company pays its employees in cash every Friday. A supported employee is learning to appreciate the role of money in her life. Her enthusiasm for continuing to work lags towards the end of each work day. The job trainer feels that if the employee could be paid daily for a few weeks the employee could learn to appreciate pay as a natural motivator. The job trainer negotiates with the employer for daily pay for three weeks. After that point the employer and the trainer will consider fading the daily pay to bi-weekly and eventually to weekly.
3. A company utilizes a formal weekly meeting between the supervisor and each employee as a performance review and motivational strategy. Your employee

becomes extremely nervous, even agitated, at the prospect of these meeting during the first two weeks of training. You negotiate with the supervisor for your to provide the review, each week, with the supervisor sitting in providing positive comments. Gradually you fade your comments and the supervisor begins to be primarily responsible for the feedback, as the employee gets to know the supervisor and his job.

4. An employee is experiencing difficulty in increasing her production rate. After exhausting many other strategies, the job trainer works with the employee in setting very concrete productivity goals for each thirty minutes of work. The job trainer also develops a set of responses designed to encourage performance and to acknowledge quality effort. The trainer closely attends to the employee's productivity by keeping data and relating the results to the employee. As the employee's productivity begins to increase, the trainer gradually begins to fade the degree of supervision and comment until an acceptable level of performance is established.

The approach to instruction based on the Try Another Way Approach does not contain specific strategies for reinforcing which provide artificial reinforcement on every correct response to learning a task. It is our opinion that if "No News is Good News" is followed by trainers, employees can, and in most cases, will learn and produce without constant artificial reinforcement by job trainers. This perspective in no way implies that the natural affirming relationships that can develop between people are problematic. In fact, we view these interactions as positive and natural.

The trainer, however, must constantly assess the balance which must exist between the needs of the employee to learn and the desirability to teach in as natural manner as possible. If trainers feel, after exhausting all natural strategies, that a long term, artificial reinforcement strategy is necessary to help people learn and stay in valued natural work settings, they should consult behavioral strategies available outside this approach to training and deliver those strategies within a set of values similar to those suggested by this approach.

