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ABSTRACT

This item consists of three separate "Technical Assistance Guides" combined into one document because they all are concerned with improving access to information for handicapped people. Specifically, the three guides provide: (1) information to enable hearing impaired, visually impaired, and mobility impaired persons to have access to public meetings; (2) information on special devices that can be used to imp. ve communication with hearing impaired persons; and (3) information on steps to enable visually impaired persons to have access to printed materials. The first quide has the following sections: title, purpose, notice of public meetings and requests for special services, access for hearing impaired persons (e.g. provision of interpreters), access for visually impaired persons (e.g. provision of Braille and large print materials), access for mobility impaired persons (e.g. wide aisles for wheelchair access), availability of this document in alternate formats, and resources. The second guide has the following sections: title, purpose, background, availability in alternate formats, resources, and types of assistive listening devices (e.g. audio loop system, infrared systems, AM systems, FM systems, and hard wired systems). Each device is covered in terms of a brief description, major advantages, major disadvantages, and costs. The third guide has similar sections and covers printing factors that affect readability including type size, type selection, line leading, proportional spacing and hyphenation, line width, columns, paragraphing, contrast and color, finish, and color screens and reversals. (DB)

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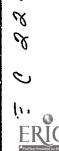
Access to Public Meetings

Assistive Listening Devices (ALD's)

and

Access to Printed Information by Visually-Impaired Persons

U.S. Department of Justice Civil Rights Division Coordination and Review Section





TECHNICAL ASSISTANCE GUIDE

ACCESS TO PUBLIC MEETINGS

TAG-85-1, R11-88



1. Title

Access to Public Meetings

2. Purpose

This Technical Assistance Guide (TAG) provides information on steps that will enable hearing-impaired, visually-impaired and mobility-impaired persons to have access to public meetings. This TAG does not address the architectural accessi- bility of the facility in which the meeting is held. The facility in which a public meeting is held must be accessible to the extent necessary to permit access to the meeting room. Public meetings are those meetings to which access is not restricted except by the topic of the meeting or the size of the facility. \(^1\)

3. Notice of Public Meetings and Requests for Special Services

Notifying the public about meetings through the newspaper or any other single general medium may not be effective in providing notice to persons with sensory impairments. When giving public notice agencies should ensure that the notification will reach individuals with handicaps who may be interested in attending the meeting. Agencies planning to conduct public meetings should include in all announcements about the meeting, a notice indicating that services of the kind discussed below for disabled persons will be made available. The notice should include the name, address and telephone numbers (both voice and TDD) of a person to contact about these services. The announcement should request that individuals with handicaps inform the meeting sponsor of their need for special services far enough in advance of the meeting to enable the sponsor to secure these services.

The amount of advance notice required and feasible may depend on the nature of the meeting and how much notice the sponsor provides the public.

4. Access for Hearing-Impaired Persons A. Interpreters should be provided for hearing-impaired attendees. Interpreters who can send and receive sign language fluently and who are skilled at oral interpretation should be provided. It is the respon-



Several other TAG's are also relevant to the topic of access to public meetings. A complete list of TAG's can be found in TAG-87-1 "Section 504 Transition Plan and Self-Evaluation Information", available from the Coordination and Review Section, Civil Rights Division, U.S. Department of Justice, Washington, D.C. 20530, (202) 724-2222 (Voice), (202) 724-7678 (TDD).

sibility of the institution or agency convening the public meeting to provide and pay for interpreter services. It is not the responsibility of the convening agency to pay for any interpreter that the attendee brings to the meeting.

- B. There should be at least two interpreters available for each meeting likely to exceed 15 minutes where hearing-impaired persons will be present. A minimum of two interpreters are needed so that one can relieve the other, thus enabling them to maintain their effectiveness.
- C. Meeting rooms should be well lighted so that the interpreter can be easily seen by hearing-impaired persons. Hearing-impaired attendees should be able to see the speaker and the interpreter at the same time. If the room in which the meeting is being held is large, seats for hearing-impaired persons should be reserved close to the interpreter.
- D. Speakers should be instructed to speak clearly and at a moderate pace to facilitate sign translation. Speakers should also be instructed to clearly identify themselves, either by raising their hands or standing, so that the interpreter and hearing-impaired person can easily identify who is speaking.
- E. If audio-visual presentations are made during the meeting, the material should be either signed or captioned. If the presentation is signed, special steps should be taken to ensure that the presentation and the interpreter are visible to the hearing-impaired person at the same time and that the lighting is adequate.
- 5. Access for Visually-Impaired Persons
- A. Meetings rooms should be well lighted.
- B. If printed material related to the proceedings is distributed prior to the meeting the material should be made available on tone or speech indexed audio tape if requested.
- C. If printed material needs to be read during the meeting in order for attendees to participate effectively in the meeting, then readers for the blind and visually-impaired should be provided.
- D. If there will be blind or visually-impaired participants or attendees at the meeting, the sponsor should consider the use of large print and Braille agendas.
- E. If a transcript of the meeting is made available to the general public, it should be made available to blind and visually-impaired persons. For example, if a transcript is produced and made available



for public inspection, a tape recording of the proceedings or readers should be made available on request to assist blind and visually-impaired persons in using the document. If meeting transcripts are distributed to the public, tone or speech indexed audio tape copies of the transcript should be made available to blind and visually-impaired persons.

6. Access for Mobility-Impaired Persons

A. The aisles of the meeting room should be inspected prior to the meeting to ensure easy passage by persons using wheelchairs. If the design of the meeting room makes it difficult for mobility-impaired persons to gain full access to the room the meeting sponsor should be prepared, on request, to provide assistance to mobility-impaired persons. For example, if the aisle gradient is too steep to be negotiated independently by some persons in wheelchairs, individuals should be available to push such persons up the aisle.

B. Open, level areas that are not situated along emergency egress routes should be available for persons in wheelchairs. If the meeting is conducted in a sizable assembly rea, guidance can be found in the Uniform Federal Accessibility Standards (UFAS) as to how many seats, usable by persons in wheelchairs, should be set aside. See § 4.1.2(18), 41 C.F.R. § 101-19.6, App. A.

C. The entry doors to the meeting room should have clear opening widths of at least 32".

7. Availability in Alternate Formats

This document is available, on request, from the Coordination and Review Section (see address below) in the following formats.

- ⇔ Audiotape
- ⇒ Large Print
- ⇔ Braille
- ⇔ Computer Disk

8. Resources

A list of resources has been compiled and can be obtained by contacting:

Coordination and Review Section Civil Rights Division U.S. Department of Justice Washington, D.C. 20530 (202) 724-2222 (Voice) (202) 724-7678 (TDD)





TECHNICAL ASSISTANCE GUIDE

ASSISTIVE LISTENING DEVICES (ALD'S)

TAG-85-2, R11-88



1. Title

Assistive Listening Devices (ALD's)

2. Purpose

This Technical Assistance Guide (TAG) provides information on special devices that can be used to improve communication with hearing-impaired persons. It discusses the problems ALD systems are intended to solve or ameliorate and the costs, advantages and disadvantages of different ALD's.

3. Background

There are approximately 13 million hearing-impaired persons in the United States. A significant number of these individuals can benefit from the use of an ALD.

An ALD is a device that picks up sounds (voice, music, etc) at, or close to its source, amplifies it and delivers it to the user's ear. An ALD has advantages over conventional amplification systems. Because the signal to be listened to is the only sound picked up by the system and transmitted to the users's ear the hearing-impaired person's perception of that sound is significantly improved. ALD's can improve interpersonal communication in meetings and other forms of public assembly.

4. Types of Assistive Listening Devices

A. Audio Loop System

Description

In an audio loop system, a loop of wire is placed around a seating area and connected to the public address system. Hearing-impaired persons wearing a hearing aid equipped with a telecoil or portable loop receiver are seated in the area surrounded by the wire audio loop. An electrical current flowing through the loop creates a magnetic field that induces another current in the receiving mechanism. The receiver is equipped with an amplifier so that the sound level can be controlled by the hearing-impaired person.

Major Advantages

No special receivers are needed by people whose hearing aids are equipped with telecoils. Prepackaged systems can be quickly and easily installed in small and medium sized spaces and are relatively



inexpensive. A prepack- aged system does not need a professional installer.

Major Disadvantages

Use of the audio loop requires hearing-impaired persons to be seated in one area. The system is vulnerable to electrical interference. Systems for large areas are complex to install and a high powered amplifier is required. Large space systems require skilled professional installation. If the cables are not concealed or covered adequately there is a danger of people tripping en route to or from their seats. Lastly, the labor to install a concealed or aesthetically acceptable large area loop system can be very time consuming and expensive.

Costs

Costs range from \$350 for small area coverage up to \$2,500 for a large loop and a powerful amplifier. Portable receivers cost about \$75 each.

B. Infrared Systems

Description

In an infrared system, an infrared emitter is connected to the public address system and invisible infrared light carries the sound to an infrared receiver worn by the listener. The receiver contains an amplifier so the listener can control the sound volume.

Major Advantages

The system is not subject to electrical interference and users do not need a hearing aid equipped with a telecoil. This s; stem has good sound quality and is easy to operate. Users of the system can sit anywhere that is in a line of sight with the emitter.

Major Disadvantages

Large amounts of incandescent light or sunlight in a room produce interference, and receivers must maintain a line of sight with the emitter. Large area systems are relatively expensive.



Cost

The infrared emitter ranges in cost from \$150-\$1,800. Receivers cost about \$120 each. Wall mounts and accessories are additional, and additional emitters are required as room size increases.

C. Aid Systems

Description

The sound in the public address system is broadcast through the room by an AM transmitter. Users listen through an earpiece or headset plugged into a special AM receiver.

Major Advantages

The system is easy to install and users have the freedom to choose where they want to sit. AM equipment is less expensive than the FM and infrared systems.

Major Disadvantages

AM systems are vulnerable to considerable interference. AM systems do not perform well in buildings with substantial amounts of structural steel.

Costs

Transmitters cost from \$350-\$1,600 and receivers cost from \$10 to \$35.

D. FM Systems

Description

A signal is transmitted by an FM transmitter plugged into the public address system to a portable receiver. Receivers resemble a small pocket radio connected by a cord to an earplug or headphones. A neckloop can be used by persons with a hearing aid equipped with a telecoil.

Major Advantages

This system produces excellent sound quality and users have the freedom to choose their seating location. The system is not subject to electrical interference and is simple and inexpensive to install.



Major Disadvantages

The system is more expensive to purchase than the AM system or an audio loop system.

Costs

Transmitters range in cost from \$500-\$2,000 and receivers range in cost from \$15-\$350 each.

E. Hard Wired Systems

Description

Each listener location is wired directly to the source of amplified sound. This requires that a number of jacks with volume controls, be installed at predetermined locations where the user can plug in an earpiece or headset.

Major Advantages

In newly-constructed facilities this system is easily installed and is not subject to electrical interference.

Major Disadvantages

Hearing-impaired persons must sit in predetermined locations to use the system. Installation in an existing facility can be expensive and installation of additional locations may require re-engineering the system to maintain the proper impedance match.

Costs

The cost of these systems varies greatly. Costs can be considerably reduced if the system is installed when the facility is constructed.

5. Availability in Alternate Formats

This document is available, on request, from the Coordination and Review Section (see address below) in the following formats.

- ⇔ Audiotape
- ⇔ Large Print
- ⇔ Braille
- ⇔ Computer Disk



6. Resources

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U. S. Department of Justice Civil Rights Division Coordination and Review Section



TECHNICAL ASSISTANCE GUIDE

ACCESS TO PRINTED INFORMATION BY VISUALLY-IMPAIRED PERSONS

TAG-85-3, R11-88



1. Title

Access to Printed Information by Visually-Impaired Persons

2. Purpose

This Technical Assistance Guide (TAG) provides information on steps that will enable visually-impaired persons to have access to printed materials.

3. Background

Access to printed information for millions of visually-impaired Americans is significantly restricted because the printed information is not readable. In general, the readability of printed material may be defined in terms of those characteristics that determine the speed, accuracy and ease with which it may be read. Often the limitations of visually-impaired persons are not considered by editors when they select type size, paper color, and other factors that determine readability.

4. Printing Factors that Affect Readability 1

A. Type Size

The size of type affects readability. The unit of type size is called a point. The American point is about 1/72 inch in height, making a 12 point letter about 1/6 inch high. The use of small point type (six to eight points or smaller), commonly found in newspapers and footnotes, significantly affects the readability of the document. The following recommendations should assist in producing printed material that is more easily read by visually-impaired persons.

- Twelve point type is needed by persons with marginal difficulty in reading (a substantial percentage of the population 50 years of age and older has difficulty reading).
- A minimum of 14 point is needed for those persons with seriously impaired vision.
- B. Type Selection

There are many type faces or styles. Some type faces are more readable than others. The following recommendations should help

¹ This discussion is based on an article by Jack B. Ralph, M.A., entitled "A Geriatric Visual Concern: The Need for Publishing Guidelines", Journal of the American Optometric Association, Vol. 53, Number 1, January 1982.



editors select the type that is more easily readable by visually-impaired persons.

- Type faces that use the largest amount of available space for the character (letter) should be selected.
- Boldface and italic type should be used sparingly, and should not be used in long passages.
- All capital letters should not be used for text.
- Serif face type should be used for general text up to 13 point size. Sans serif should be used in 14 point and larger and for captions, headings, and reversals.

C. Line Leading

Line leading (pronounced "ledding") is the space between lines of type. With print smaller than 11 point a decrease in line leading will decrease readability.

In order to maximize readability, no more than two lines of leading should be used. With 11 or 12 point type one or two lines of leading can be used and with print smaller than 11 point, two lines of leading should always be used.

D. Proportional Spacing and Hyphenation

A readability problem is created with typewriter type when a uniform width is used for all letters. Letters in our alphabet are not the same width. The letter "i", for example, is less wide than the letter "w". American Typewriters type, the standard type face used on many typewriters, allows the same amount of width for the letter "i" as for the letter "w". The use of extra white space on each side of the letter "i" and other narrow letters, and the elimination of all white space on each side of the letter "w", decreases readability. Proportional spacing allows for adjustments between letters to eliminate unnecessary white spaces and to allow extra space for wider letters. IBM Modern Type is a type style with proportional spacing. Because proportional spacing increases readability, its use is recommended.

Hyphens break up words and require the reader to remember the last syllable on the previous line and refocus on the remaining word part on the next line. Hyphenation increases the problems that persons with limited vision have reading and understanding printed material. Therefore, hyphenation of right margins should be avoided.

E. Line Width

The width of a line from left to right is measured in picas. There are six picas to an inch. Generally there is greater risk of loss of readability when wider lines are used. Line width of 11 or 12 point type should not exceed 36 picas (six inches) for single column text.

F. Columns

If multiple columns are used, columns should not be more than 18 picas wide (three inches) and separations between are better with 1/2 pica on each side of a vertical rule or line.

G. Paragraphing

Paragraphs should start with either an indent for the first line of the paragraph or an extra space between paragraphs if block style is used. Indenting is more effective. Inner margins in a text book or in pamphlets of more than 20 pages should be larger than the outer margins.

"Wrap" and "run around" irregular width lines as a margin should be avoided. In some advertisements, and even in the layout of some magazine articles, a figure or a photo is printed in the center of the page with reading material running along side, above, and below the figure or photo. The typesetting technique for the reading material is to follow closely the irregular edges or the figure or photo producing different line widths and irregular right and left margins. This technique decreases readability.

H. Contrast and Color

In combining print and background colors, care must be taken to produce the maximum brightness contrast between print and background. The printer should concentrate on brightness contrast. Relying on the following recommendations will improve the readability of the printed material by maximizing the brightness contrast between print and background. Other combinations of color values may be used but as one moves away from the parameters established below, brightness contrast is reduced and readability may be affected.

Black ink on white or pastel paper is preferred. If colored print and paper are used, two shades of the same color should be avoided and a light color should be used for the background.



- Black ink should not exceed a Munsell Value ² of 2.18/, which is equivalent to a Government Printing Office (GPO) luminance of 3.6%. Paper used with black ink, should have a minimum Munsell value of 8.6/ which is equivalent to a GPO luminance of 70.37%.
- Colored ink should not exceed a Munsell value of 2.5/, which is equivalent to a GPO luminance of 4.61%. Paper, used with colored ink, should have a minimum Munsell value of 8.9/ which is equivalent to a GPO luminance of 76.53%.

I. Finish

Paper with a matte finish is preferable to "shiny" or coated paper. If coated paper must be used, paper that is off-white is preferable to other colors.

J. Color Screens and Reversals

Readability problems can occur when screened inks are used to place reverse reading material against a colored background. Frequently there is not enough contrast between the reversal and the background of screened colored ink. Relying on the following recommendations will improve the readability of reversals by maximizing the brightness contrast between print and background. Other combinations of values may be used but as one moves away from the parameters established below, brightness contrast is reduced and readability may be affected.

- The minimum size type in the reversal letters should be 11 point of medium or bold sans serif.
- With black or colored ink lettering on a screened color background the minimum Munsell value of the screened color background should be 8.9/, which is equivalent to a GPO luminance of 76.53%
- With white reversal lettering on a screened color background the maximum Munsell value of the ink should be no more than 2.5/, which is equivalent to a GPO luminance of 4.61%



Munsell Color, 2441 North Calvert Street, Baltimore, MD 21218 (301) 243-2171. The Munsell system of color notation identifies color in terms of three attributes: hue, value and chroma. The Munsell notation for color value is 8.9/, 2.5/, etc.

- With reversals against a screened background, the reversal lettering should have a minimum Munsell value of 8.9/, which is equivalent to a GPO luminance of 76.53%
- The colored ink used in the reversal for the background can bleed into the letters, thus reducing contrast. Bleeding should be kept to a minimum.

5. Availability in Alternate Formats

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Models for the Process of School Improvement

This chapter examines the following models for the process of school improvement: The Structure of School Improvement, Onward to Excellence, Program Development Evaluation, School-Based Improvement, and School Improvement Process. These five models were selected on the basis of their current use throughout the country and the contributions they have made to the school improvement movement in recent years.

The Structure of School Improvement

Bruce Joyce, Richard Hersh, and Michael McKibbin (1983) have proposed a structure of school improvement as a "way of life"; they define *structure* as

the pattern of relationships among the many individual components of school change: administrative leadership, teacher effectiveness, curriculum improvement, and community involvement. (p. 5)

Joyce and his colleagues argue that school improvement efforts typically lack a coherent structure and that change has been attempted without concern for the "synergistic nature of the complex process called schooling" (p.5). They consider that the social organization of the school contributes to stabilization:

Such structure creates an insidious form of homeostasis—a resistance to change which functions to separate teachers from the community, administration, and each other, and thus effectively neutralizes almost all attempts at serious innovation.

Schools, like other social organizations, are not disposed toward change and from that emerges an important paradox which provides a clue to the solution to the problem. The paradox is

quite simple: schools seek stability as a seemingly necessary condition of survival. Yet this condition of equilibrium is also the root cause of the school's inability to improve, for as society changes and/or pedagogical knowledge increases, schools need to assimilate and accommodate to new realities. How then can a school create a reasonable level of stability and constantly be open and able to change?

The answer lies in the creation of a certain type of school culture, i.e., a set of organizational norms, expectations. beliefs, and behaviors which allow the establishment of activities fundamental to school improvement. This means that what must remain constant, what must remain stable in the life of the school, is the emotional and intellectual dispositions toward improvement on the part of the Responsible Parties. We call this condition homeostasis of improvement. (p. 6)

The "Responsible Parties" in charge of school improvement—teachers, parents, administrators, and community representatives—are seen as acting together with the common goal of improving the quality of the school.

Three Stages

Joyce and his colleagues identify three stages of school improvement that they consider to be fundamental to the process and representative of successive stages of growth: refinement, renovation, and redesign (see table 1). In stage 1, the operation of the school is viewed in light of school effectiveness criteria. Curriculum and instructional practices are evaluated and program refinements developed to make them more effective.

In stage 2, curriculum areas are examined in greater detail and specific components of the innovation are chosen as the focus of improvement efforts. "New content and teaching strate-



Table 1: Three Stages of School Improvement

	Scope	Tasks			
Stage One	Refine: Initiate the process	Organize Responsible Parties Use effectiveness criteria Improve social climate of education			
Stage Two	Renovate: Establish the process	Expand scope of improvement Embed staff development Improve curriculum areas			
S:age Three	Redesign: Expand the scope	Examine mission of school Study technologies Scrutinize organizational structure Develop long-term plan			

Source: Joyce and others 1983, p. 7

gies are introduced at this point, along with increasing amounts and types of staff development" (p. 7). In stage 3, the overall mission of the school is examined and consideration is given to a range of curricular and instructional choices. In summing up their process of school improvement Joyce and colleagues conclude:

In essence, our focus is on creating environments that promote continuous examination of school effectiveness at local sites so that spicific, deliberated improvements can be made. Schools are social entities and, like the human spirit, require the challenge of improvement not only to soar but to maintain themslyes.... School improvement thrives only as life in schools is infected by adventure and tested by challenge. (p. 11)

Joyce and his coauthors acknowledge that the challenge facing their approach to school improvement, and indeed all attempts at change, focuses on the problem of innovation—bringing about changes. For educational change, regardless of its potential benefits, faces many obstacles from central office personnel, principals, teachers, and community members. However, the

authors argue for "sensible school improvements" that can be routinely implemented (p. 62).

To prepare for school improvement, change agents must remember that "hard work, patience, and satisfaction with gradual progress" will provide for successful change (p.78).

Joyce and his colleagues argue for establishing a homeostasis of change:

Because homeostatic forces are more powerful than innovative forces at every level of education, ad hoc structures have to be created to promote innovation and to protect against homeostatic forces. In the absence of an executive role that promotes innovation, the necessary conditions (vertical solidarity, ownership, marshaling of resources, development of training, and community involvement) have to be created each time a decision to innovate is made and these conditions have to be sustained if the innovation is to persist.

The condition that must be created is a homeostasis of change, a condition in which organizational stability actually depends on the continuous process of school improvement. (p. 79)



Institutional Conditions

For educational innovation to become possible on a regular basis, the authors say, four conditions must be developed within the institution:

Instruction-Related Executive Functions. That is, the district office has to take direct responsibility for educational programs within schools and exercise curricular and instructional leadership. However, the Responsible Parties must have the authority to implement curriculum and instruction choices.

Collegial Teaching Units. The authors argue for the development of teaching units in which teachers would work together to make decisions, receive instructions, and improve one another's competence.

Continuous Staff Development. Like professionals in other fields, it is argued that teachers should be provided with the opportunities to continuously be exposed to new technologies and given the training to implement them.

Continuous Community Involvement. The authors believe that the powerful forces displayed by the external system serve to prevent educational change. Furthermore, they argue that political manipulation cannot, and should not, be used to overcome resistance to change efforts. Rather, the community should be closely involved in the organization of the curriculum, and should serve on councils with teachers and administrators charged with the responsibility of moderating curricular charges.

Joyce and his colleagues caution their readers against concluding that any single approach to school improvement will guarantee success, and that time to embed the improvement process in the culture of the school is a critical component:

No single strategy is likely to bring about greater effectiveness in schools. Greater executive authority, stronger staff development, increased community and teacher participation, and collegiality among teachers are all valuable, but none of them, taken alone, will create an atmosphere sufficient to support sensible decision making or resource mastery. We must use all of them....

The context of the district cannot be overemphasized. A district which provides encouragement

for school improvement and the conditions that facilitate it will make the work of the Responsible Parties much easier.... We will say over and over again that a school that is not improving is almost surely deteriorating. (p. 82)

Onward to Excellence

Robert Blum and Jocelyn Butler (1987) are major proponents of the Northwest Regional Educational Laboratory's (NWREL) Onward to Excellence (OTE) school improvement program. OTE has been developed and refined since 1982 and has steadily gained popularity in the Pacific Northwest. The school improvement process is presented to school leaders through a training program spanning two years. Schools contract with NWREL for the training, materials, and supportive technical assistance.

Guiding Concepts

OTE is intended to provide schools with a systematic, research-based approach to the improvement of student performance. According to Blum and Butler, "OTE provides a way for schools to move from effectiveness (all students master basic priority objectives) to excellence (most students achieve well beyond basic priority objectives)" (p. 1). Building on the effective schools research base, the NWREL identified "key concepts" that guided the OTE school improvement program:

- Improvements are tied to student performance, and changes in student performance are indicators of the effectiveness of school improvement efforts.
- The school is the appropriate unit for improvement efforts. Changes that improve student performance should take place at the school level.
- School improvement must be managed.
- Improvements should be based on research results.
- There should be an emphasis on improvement. No matter how good a school is, there is always room for improvement that will take place over time.



 Improvement should take place on a schoolwide basis, involving all staff. (p. 2)

Ten-Step Process

Onward to Excellence follows a ten-step cyclical process that is portrayed graphically in figure 1. The steps are summarized as follows:

- 1. Getting Started. A fundamental belief of OTE is that joint involvement of principals, teachers, and district personnel in a school improvement effort increases the possibility of the success of the program. Using this approach, a leadership team at the local school level plans and manages the implementation of school improvement efforts.
- 2. Learn about Research. The leadership team studies the effective schools research to gain knowledge about effective schooling practices before sharing these insights with their school staff.
 - 3. Profile. Before a school can plan for

- improvement, there is a need to know the current status of student performance: academic achievement, attitudes, and social behavio: The leadership team collects data about these aspects of student performance and summarizes the information into the school "Profile."
- 4. Ser Goal. At this stage in the school improvement process, the leadership team in volves the entire staff in the identification of a schoolwide goal. The staff base their decisions on the data presented in the school profile, an integral step of the improvement process.
- 5. Check Use of Practice. The leadership team collects data about the degree to which effective schooling practices currently exist in the school. This information is summarized and presented to the entire staff to use as the basis for making decisions regarding schoolwide strengths and weaknesses.
- 6. Prescription. Based on the establishment of a school goal and the identification of current practices, the leadership team reviews the effec-

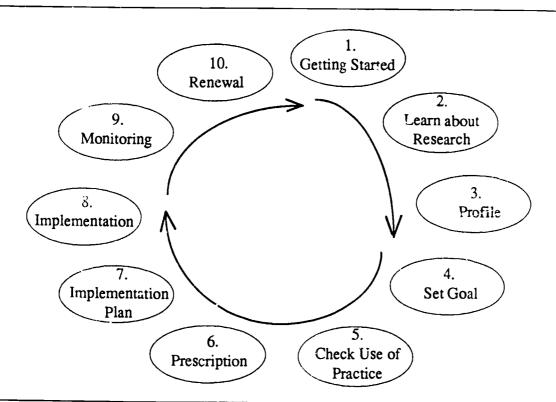


Figure 1: Onward to Excellence—School Improvement Process

Source: Blum and Butler 1987



tive schools research and selects instructional methods that can contribute to improved student performance in the goal area.

- 7. Implementation Plan. The leadership team develops a plan for implementing the selected effective schooling practices, and copies are distributed to all staff members.
- 8. Implementation. The new practices are implemented in the school.
- 9. Monitoring. The leadership team is responsible for monitoring the progress of activities specified in the plan and for adherence, by the staff, to the overall prescription of improvement. Similarly, the team monitors student performance in order to identify the impact of the improvements.

10. Renewal. Following the first cycle of improvement, the staff review results and identify strengths and weaknesses of the improvement plan and recommend ways to improve the process. Decisions are made about whether or not to continue with the existing goal or to move onto a new area.

Program Development Evaluation

Gary Gottfredson and Denise Gottfredson (1987) have argued for organizational development approaches to school improvement. Specifically, they have described Program Development Evaluation (PDE) as a structure for school improvement. The Gottfredsons contend that PDE differs from most other models of school improvement in the following ways:

First, it uses "theory" as one of the bases for defining programs, selecting interventions, and evaluating progress; and the method itself is based on a theory of organizational effectiveness. Theory plays a central role in the PDE method because it clarifies objectives and focuses program development on a variety of alternative interventions directed at school objectives while excluding irrelevant interventions, and it provides a basis for day-to-day decision making in circumstances where no well developed plans exist.

A second difference between PDE and related

methods is that PDE calls for more detailed attention to the problem of implementation. (p. 2)

The authors claim that PDE deals with implementation issues accompanying the adoption of interventions by focusing on the culture of the school, developing specific plans for the adoption of innovations, and incorporating specific mechanisms to monitor the fidelity with which innovations are implemented.

The use of the PDE method involves considering the "organizational culture" surrounding a school improvement effort; like other organizational development approaches, it provides a structure for coping with, and manipulating, the adoption and implementation of innovations. In applying PDE, researchers collaborate with school personnel to

- define problems and set measurable organizational goals
- specify theories of action on which to base school improvement
- define measurable objectives linked to the theory of action
- · select interventions
- identify and plan to overcome obstacles to the implementation of interventions
- develop detailed plans including benchmarks to monitor progress in implementation
- specify implementation standards (p.3)

An integral component of PDE is the collaboration between practitioners and researchers in evaluation of school improvement efforts. An information and feedback system is established that provides data used to refine innovations and to determine whether programs are being implemented as planned and achieving the anticipated outcomes. "The process is intended to be helical—planning and program development become part of the everyday routine in the organization, creating a spiral of improvement" (p.4).

The Gottfredsons also identify the following conditions that they believe contribute to making schools conducive to organizational development interventions:

- A spirit of collaboration exists.
- The administration is supportive of the intervention.



- The school does not have a history of one failed innovation after another.
- The entire staff is involved in the decision to participate in the project.
- Staff morale or teacher sense of efficacy appears to be an important factor in the adoption of school improvement programs. (p. 5)

Following an illustrative case of a "school with difficult problems," the Gottfredsons outline a list of general principles they believe might form a good starting point for school improvement:

- 1. Improvement efforts are enhanced when teachers and administrators share clearly understood goals and understand the rationale for adopting new programs.
- 2. The greater the benefits from a new program, the more likely participants are to use them and persist in doing so.
- Schools are more likely to become better and safer places if information about impediments to implementation is encouraged and applied.
- Innovation is more likely to be successful when explicit plans for the adoption of new programs are available.
- Guidelines providing concrete guidance in the adoption of new programs increase the chances of success.
- 6. Availability of resources is critical to the adoption of new programs.
- Participants in an improvement effort need to be encouraged by others in the school or district who observe their attempts at program adoption.
- A structured approach to school improvement will foster the emergence of these conditions. (p. 11)

School-Based Improvement

Barbara Hansen and Carl Marburger (1988) have developed a manual for school-based improvement (SBI) for the National Committee for Citizens in Education (NCCE) that is built on the belief that parents and citizens should take a

more active role in the governance of schools. The authors describe two prerequisites for those persons who take responsibility for school-based improvement efforts:

- A belief that lasting educational improvement requires a major restructuring of the enterprise, not simply adding another program to those already in existence
- A belief that in some way they can influence the power structure within the district to permit the restructuring to occur (p. 10)

The authors describe the development of the SBI model as follows:

From a pilot program with five schools in New Jersey we discovered something very important: changing the decision making structure of a school or district isn't enough to create sustained, focused school improvement. For that to happen, local school decision-making groups, usually called school councils, need to learn how to get and use information—data on their own schools as well findings from high quality studies in education. Now, instead of emphasizing school based management, NCCE works with districts in instituting school based improvement, with democratic decision making as a major element in the process. (Hansen and Marburger 1988, p. 11)

Some features of the school-based improvement model promoted by the NCCE are as follows:

- Training district SBI facilitators to work with local school councils
- · Involving parents in school improvement
- Providing extensive and ongoing training of council members
- Clarifying decision making roles through the negotiation of a memoranda of agreement
- Providing councils with a tested agenda for school improvement by linking their efforts to the research on effective schools (p. 11)

Characteristics and Beliefs

The authors maintain that school-based improvement is a process that requires political decentralization and shared decision-making, and while the specifics of SBI may vary from school to school, all applications of the program have



three common characteristics: a management philosophy, an educational strategy, and an organizational structure. Among the beliefs on which SBI has been founded are the following:

- Without bureaucratic interference, decisions are made more swiftly at the local level.
- It's easier to change people's behavior than to alter their beliefs.
- When people work together on common concerns, they lose the sense of being in separate camps.
- The resources needed for school improvement are already in the school community.
 All we must do is release the energy that is now constrained.
- Parents are important contributors to the educational success of their children.
- Involving students in decision making gives them an opportunity to become responsible members of a democratic society. (p. 15)

Hansen and M Durger also maintain that teachers, as the persons closest to school activities, are in the best position to have reliable opinions and judgments about school improvement activities and should be the ones to decide the best way to perform their duties:

All parties to the enterprise are strengthened by the SBI process. When we empower others, we become empowered. When superintendents trust principals and staffs to make more significant decisions about what happens at their school, the superintendent has not lost power or authority but has gained the strength of a united and trusting faculty. When teachers trust the principal to act in the best interest of both the students and themselves, that principal, by empowering them, has now become stronger that he or she could ever be as the sole decision maker. (p. 17)

Barriers to Success

Hansen and Marburger report that evaluations of SBI efforts show that success comes when participants see themselves as gaining power rather than losing it. Some of the barriers to success encountered by SBI include lack of school control over budgets, insufficient adminis-

trative and leadership support, little teacher involvement in and commitment to the process, and too little time allowed for the process to succeed.

School Improvement Process

Jill Casner-Lotto (1988) has described a School Improvement Process (SIP) being used in the public schools in Hammond, Indiana. Casner-Lotto outlines the structure of the SIP as follows:

A SIP, which draws on the collective energy and expertise of teachers, administrators, students, parents, and other community members, is fundamentally changing the way schools operate and enhancing opportunities for learning.

For the first time, teachers in Hammond can have a major say in decision making and in shaping educational programs that they believe will be best suited to their students. (p. 349)

The decision-making involving teachers now includes involvement in tasks previously undertaken by principals and administrators: curriculum planning and development, instructional strategies, staffing needs, professional development, disciplinary procedures, scheduling, and so forth. All these activities are condoned by the local Hammond Teacher 'Federation.

According to Casner-Lotto, participants in the Hammond SIP define it as "a building-based method of managing schools that can lead to significant improvements in the quality of education" (p. 350). Central to the SIP are several beliefs held by district teachers and administrators:

- that decision making remains school-based
- that those persons most closely affected by decisions should have a major role in making them
- that reforms are most effective when carried out by personnel who have ownership of them

Planning of the improvement process commences with participants' identifying the key



elements for an effective improvement plan. Included in the list of factors are training, time, money, ongoing district support, and access to current or state-of-the-art information on which to base decisions. However, Casner-Lotto acknowledges that there has not been a uniform implementation of the SIP in Hammond's schools due to the idiosyncratic nature of schools: each school adapts the process to meet its own culture and desired pace of change.

The school improvement process at each site is facilitated through the development of building-based improvement committees consisting of fifteen to twenty members, including teachers, adminstrators, parents, students, and other community members. The focus for the group is set by a smaller executive committee usually consisting of the principal, one or two teachers, and a parent. Interestingly, Casner-Lotto warms that "the principal should never chair the SIP committee, because this would merely perpetuate the traditional top-down approach to school improvement" (p. 351).

Following initial training at the school level by the district's school improvement facilitator, the first task of the SIP team is to develop a "vision of excellence"—a statement of the team's goals for the next five or ten years. "Specific long- and short-range goals and priorities are determined, and then a strategic improvement plan is developed" (p. 351). Casner-Lotto describes a central theme of the Hammond SIP:

A key component of the SIP is the concept of "pyramiding," which, when done properly, increases the number of people who have input into decision making and thus increases the acceptance of new programs and policies. Pyramiding requires that each member of the SIP team in eract regularly with five to seven peers. This interaction consists of communicating information about the team's work or about a specific proposal and gathering feedback from interested parties who are not members of the team. Each member of the initial group of five to seven individuals is then expected to reach a similar number of people, who, in turn, contact others. In this way, a significant portion of the school population can be reached in a relatively short time. (p. 351)

Common Characteristics

This chapter has provided a brief overview of five models of school improvement: The Structure of School Improvement, Onward to Excellence, Program Development Evaluation, School-Based Improvement, and School Improvement Process. Several characteristics common to the approaches can be indentified

First, the participants in school improvement efforts include teachers, principals, district administrators, parents, community members, and possibly students. All these programs involve staff on a schoolwide basis and promote collaboration among researchers and school personnel.

Second, to overcome the stability that exists in schools, the programs accept the notion that there is always room for improvement. This has been expressed in terms of creating a school culture that allows for the establishment of school improvement activities—the "homeostasis" of school improvement as described by Joyce and his colleagues (1983), or a "spiral" of improvement as characterized by the Gottfredsons (1987).

Third, several key stages in the school improvement process can be observed:

- Initiate the process by defining the problem and identifying the key elements of the school effectiveness research that will help in the development of an improvement plan.
- Establish the process of school improvement in the school "culture" and plan to improve identified curriculum areas. Include long-range goals and a "vision of excellence."

 Also plan to overcome the obstacles to school improvement.
- Implement the improvement plan involving teachers, students, parents, community members, with the help of supportive district administrators.
- Monitor the implementation of the improvement plan and make any necessary adjustments to the plan to facilitate the process.
- Evaluate the improvement effort against implementation standards through an information and feedback system.
- · Renew the school improvement process



involving the "responsible parties" and decide on a new school focus.

And finally, the programs are alike in acknowledging that several conditions contribute to successful school improvement efforts:

- A spirit of collaboration exists among the participants in a school improvement effort.
 District add... trators exercise leadership in curriculum and instruction matters while school-level personnel have the authority to implement choices.
- School improvement efforts should be research-based with links to the literature on school effectiveness.
- Decision-making should be school-based with the school as the unit of change.
- The more Lenefits experienced by the users of an innovation, the more likely they are to persist with its use.



Making Decisions about School Improvement: Steps to Action

In this final chapter our attention turns to some recommendations for school improvement that should be considered by the "responsible parties" as they negotiate the model of school improvement that will best meet their needs. Assisting in this decision-making process is the accompanying matrix of school improvement models (table 2), which highlights key characteristics of the school improvement models described in this paper.

Qualifying Assumptions

Several assumptions about school improvement should temper any decisions about how to proceed with the process. That is, adoption of a model of school improvement, or an ecrectic approach agreed upon by the "responsible parties," does not necessarily guarantee improvement. Change must occur at the school level where "working together becomes the new norm of the school culture" (Lieberman and Rosenholtz 1987, p. 87).

Similarly, Karen Seashore Louis (1989) has identified three assumptions concerning school improvement at the district level that should be considered. First, school improvement is a multilevel process that typically requires the cooperation of actors at different levels in the educational system, ranging from central office administrators, principals, teachers, students, and parents up through policymakers, and perhaps even the representatives of political parties.

Second, effective school improvement is a planned process that develops slowly, often over a period of a decade or more. Policies that do not propose a strategy for managing the slow process of change are less likely to succeed than those that do.

And third, strategies for managing the improvement process are incompletely designed and evolve over time. Thus, the process of school

improvement is inherently unstable and dynamic (for further discussion, see Louis 1989, p. 146).

These assumptions ought to temper the deliberations of parties undertaking a school improvement effort. That is, in making decisions about selecting a school improvement model, or applying the recommendations made in this paper, participants should make adjustments to the strategies they employ in light of the underlying assumptions inherent in the school improvement process: change must occur at the school level, requiring the cooperation of "actors" at all levels; it involves a planned process that evolves slowly over time; and it must establish a school culture that encourages working together.

Recommendations

The following seven recommendation—drawn from the models of school improvement discussed in this paper—can help school districts in their efforts to improve instructional programs:

- 1. Foster an attitude favorable to change.

 Look at ways to develop an attitude of "there is always room for improvement" in the district.

 Promote a school culture that allows for regular school improvement acririties—the "homeostasis" of school improvement, or a "spiral" of improvement. Changing school culture is not an event that will yield immediate results. Rather, it is a process that may evolve over many years
- 2. Broaden the range of participants in the school improvement process. Many school districts rely solely on the skills of the central office personnel, principals, and teachers. Including the district's parents, community members, and students in efforts to improve instructional programs may extend the available resources. However, this step necessitates a trusting relationship between schools and community.
- 3. Initiate the school improvement process by defining the problem and identifying key ele-



Table 2: Characteristics of Models of School Improvement

	Provides for Ongoing School Im- provement	Involves Broad Range of Participants	Initiates Process by Defining the Problem	States Long- Range Goals	Includes Information /Feedback Systems	Anticipates Obstacles	Fosters a Spirit of Collaboration
The Structure of School Improvement	V	~	V	V	v		V
Onward to Excellence	'		V	V	V		•
Program Development Evaluation	V		•	v	~	,	•
School-Based Improvement		V	V				•
School Improvement Process		V	V	•			•

ments of the school effectiveness research that will help in the development of an improvement plan. Administrators must provide leadership and support in areas of curriculum and instruction by involving the district's "sponsible parties" in identifying and defining problems.

- 4. Write a "Vision of Excellence"—a statement of long-range goals—decided upon by the "responsible parties."
- 5. Develop an information and feedback system to monitor the implementation of improvement plans, and make any necessary adjustments to the plan to facilitate the process.
- 6. Anticipate obstacles to the school improvement effort and plan to overcome them. Through early planning, the school district can be proactive in combatting problems commonly faced by school improvement efforts. For example, ensure that schools receive the necessary financial support and administrative leadership needed for successful school improvement.

7. Promote a spirit of collaboration among participants in the school improvement effort. While it is important for district administrators to provide leadership in curriculum and instruction matters, it is also important that school-level personnel have the authority to implement choices.

Given the situation that exists in many school districts, and the synthesis of school improvement models and literature on educational change, I would propose that the lessons discussed here may contribute to the success of future school improvement programs. Clearly, these recommendations would not ameliorate all the obstacles facing school improvement efforts in school districts around the country. Problems with school improvement are the concern of all the participants and require cooperation at all levels. Without such cooperation, I believe that school improvement will continue to be an elusive dream.

District personnel undertaking school im-



provement efforts need to be aware of the variety of models that exist and be prepared to make decisions concerning the process that will facilitate their efforts. Every approach has its costs and benefits, and the "responsible parties" must decide how best to minimize their los es. But perhaps the most important lessons relate to the very essence of school improvement; it is a process that takes place over an extended time and necessitates a change in the culture of the school. In an institution that is inherently stable, the culture needs to allow for the establishment of school improvement activities as regular components of the daily functioning of schools.



Bibliography

- Blum, Robert E., and Jocelyn A. Butler. "Onward to Excellence': Teaching Schools to Use Effective Schooling and Implementation Research to Improve Student Performance." (Sponsored by Northwest Regional Educational Laboratory, Portland, Oregon.) Paper presented at the annual meeting of the American Educational Research Association: Washington, DC., April 1987. 23 pages. ED 298 649.
- Casner-Lotto, Jill. "Expanding the Teacher's Role: Hammond's School Improvement Process." Phi Delta Kappan 69, 5 (January 1988): 349-53. ED 364 791.
- Cohen, Michael. "Improving School Effectiveness: Lessons from Research." In Educators' Handbook: A Research Perspective, edited by Virginia Richardson-Kohler. 474-90. New York: Longman, 1987.
- Crandall, David P.; Jeffrey W. Eiseman; and Karen Seashore Louis. "Strategic Flanning Issues That Bear on the Success of School Improvement Efforts." Educational Administration Quarterly 22, 3 (Summer 1986): 21-53. EJ 341 150.
- Cuban, Larry. How Teachers Taught: Constancy and Change in American Classrooms 1890-1980.
 New York: Longman, 1984.
- Fullan, Michael. The Meaning of Educational
 Change. New York: Teachers College Press,
 1982.
- . "Change Processes and Strategies at the Local Level." *Elementary School Journal* 85, 3 (January 1985): 391-421. EJ 315 744.
- Gottfred n, Gary D., and Denise C. Gottfredson.

 Using Organizational Development to
 Improve School Climate. Report No. 17.
 Baltimore, MD: Center for Reseach on Elementary and Middle Schools, Johns Hopkins University, 1987. 30 pages. ED 295 283.
- Government Accounting Office. Effective Schools
 Programs: Their Extent and Characteristics.
 Gaithersburg, MD: GAO, 1989.
- Gross, Neal. "Basis Issues in the Management of Educational Change Efforts." In The Dynamics of Planned Educational Change: Case Studies and Analyses, edited by Robert

- E. Herriot, and Neal Gross. 20-46. Berkeley, CA: McCutchan, 1979. 409 pages. ED 186 168.
- Hansen, Barbara J., and Carl L. Marburger. School Based Improvement: A Manual for District Leaders. Columbia, MD: The National Committee for Citizens in Education, 1988. 81 pages. ED 301 954.
- Hord, Shirley M.; William L. Rutherford; Leslie Huling-Austin; and Gene E. Hall. *Taking Charge of Change*. Alexandria, VA: Association for Supervision and Curriculum Development, 1987, 102 pages. ED 282 876.
- House, Ernest R. The Politics of Educational Innovation. Berkeley, CA: McCutchan, 1974.
- Huberman, Michael A. "School Improvement Strategies That Work: Some Scenarios." Educational Leadership 41, 3 (November 1983): 23-27. EJ 289 714.
- _____."Teach Careers and School Improvement."

 Journal of Curriculum Studies 20, 2 (March-April 1988): 119-32. EJ 368 143.
- Huberman, A. Michael, and Matthew Miles. *Innovation up Close*. New York: Plenum, 1984.
- Joyce, Bruce R.; Richard H. Hersh; and Michael McWibbin. The Structure of School Improvement. New York: Longman, 1983.
- Leithwood, K.A., and D.J. Montgomery. "The Role of the Elementary School Principal in Program Improvement." Review of Educational Research 52, 3 (Fall 1982): 309-39. EJ 273
- Levine, Daniel U., and Robert E. Leibert. 'Improving School Improvement Plans." *Elementary School Journal* 87, 4 (March 1987): 397-412. EJ 351 327.
- Lieberman, Ann, and Susan Rosenholtz. "The Road to School Improvement: Barriers and Bridges." In *The Ecology of School Renewal*, edited by John Goodlad. Chicago: The University of Chicago Press, 1987, 241 pages. ED 305 742.
- Little, Judith W. School Success and Staff Development: The Role of Staff Development in Urban Desegregated Schools. Boulder, CO: Center for Action Research, 1981, 452 pages. ED 206 745.



- Louis, Karen S. "The Role of the School District in School Improvement." In Educational Policy for Effective Schools, edited by Mark Holmes, Kenneth A. Leithwood, and Donald F. Musella. Toronto, Ontario: OISE Press, 1989.
- Miles, Mathew. "Improving the Urban High School: Some Preliminary News from 5 Cases." Paper presented at the annual meeting of the American Educational Research Association, San Francisco, April 19, 1986. 28 pages. ED 288 938.
- Miller, Lynne, and Ann Lieberman. "School Improvement in the United States: Nuance and Numbers." International Journal of Qualitative Studies in Education 1, 1 (1988): 3-19.
- Mills, Geoffrey E. Managing and Coping with Multiple Educational Change: A Case Study and Analysis. Unpublished Ph.D Dissertation. University of Oregon, Eugene, OR, 1988.
- Reid, William A. "Institutions and Practices: Professional Education Reports and the Language of Reform." *Educational Researcher* 16, 8 (November 1987): 10-16. EJ 365 515.
- Sarason, Seymour. The Culture of the School and the Problem of Change. Boston: Allyn & Bacon, 1971.
- Shoemaker, Joan. Research-Based School Improvement Practices. Hartford, CT: State of Connecticut, Department of Education.
- Smith, Alfr. 1 G. "The Dionysian Innovation."

 American Anthropologist 66 (1964): 251-65.
- Smith, Louis M.; David C. Dwyer, John J. Prunty; and Paul F. Kleine. Educational Innovators: Then and Now. New York: Falmer Press, 1987.
- Smith, Louis M., and Pat M. Keith. Anatomy of Educational Innovation: An Organizational Analysis of an Elementary School. New York: Wiley, 1971.
- Snyder, Karolyn J. "Instructional Leadership for Productive Schools." *Educational Leadership* 40, 5 (February 1983): 32-37. EJ 276 375.

- Sparks, Dennis. "Staff Development and School Improvement: An Interview with Ernest Boyer." Journal of Staff Development 5, 2 (December 1984): 32-39. EJ 312 945
- Tyler, Ralph. "Education Reforms." *Phi Delta Kappan* 69, 4 (December 1387): 277-80. EJ
 363 379.
- Waugh, Russell F., and Keith F. Punch. "Teacher Receptivity to Systemwide Change in the Implementation Stage." Review of Educational Research 37, 3 (Fall 1987): 237-54. EJ 366 904.
- Wolcott, Harry F. The Man in the Principal's Office: an Ethnography. Case Studies in Education and Culture. New York: Holt, Rinehart & Winston, 1973. 334 pages. ED 078 563.
- _____."The Elementary School Principal: Notes from a Field Study." In Education and Cultural Process: Toward an Anthropology of Education, edited by George D. Spindler. 176-204. New York: Holt, Rinehart & Winston, 1974.
- _____.Teachers Versus Technocrats. Eugene, OR: Center for Educational Policy and Management, University of Oregon, 1977. 262 pages. ED 154 479.





