GUIDE FOR DISTANCE LEARNING
AN INSTRUCTIONAL MEDIA SELECTION

2008
United States Distance Learning Association

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II. An Introduction to Distance Learning

Section 1: Overview

Section 2: The Role of Distance Learning in Education

Section 3: The Benefits and Challenges of Distance Learning

Section 4: The Future of Distance Learning

Section 5: Conclusion
It should be noted that distributed learning extends from the education of continuing education environments where interaction is an inherent component of the learning experience. Distributed learning technologies include computer and telephone networks, educational media, and distance learning systems. The emphasis on the use of distributed learning methods is to foster effective learning experiences that combine the benefits of learning in a variety of settings. Wherever interaction is readily detected for good distance learning, we should not only pursue but actually encourage it in our education scene.

We would like to see learning situations where:

- Frequent contact
- Frequent contact
- Frequent contact
- Frequent contact

These situations include:

- Frequent contact
- Frequent contact
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III. Instructional Media for Distance Learning
Support visual images and graphics, and often require students' multiphase skills but do not require interaction between the instructor, conferencing environment, or conferencing equipment to communicate with each other in real time. Support a synchronous conferencing environment in which students in different locations are preparing or making different locations are preparing to make different preparations for their different learning needs and schedules.

The table below provides an explanation of the videobased media that can support the distribution of content for distance learning. The media delivery options are based on the availability of the media that can support the needs of the learners. The table includes the following video-based media options:

1. **Institutional Media Delivery Options for Distance Learning**
   - **Instructional Text**
   - **Instructional Web-based**
   - **Web-based Video**
   - **Recorded Video**
   - **Audio Only**
   - **Visual Only**

2. **Symmetry of Interactivity & Instructional Media**
   - High
   - Low

3. **Technology Options**
   - Audio
   - Video
   - Text
   - AV

Table 1

Table 3
<table>
<thead>
<tr>
<th>Satellite</th>
<th>e-Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network</td>
<td>Distribution</td>
</tr>
<tr>
<td>Protocol</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>Device</td>
<td>Decoder</td>
</tr>
<tr>
<td>Accessory</td>
<td>Remote Control</td>
</tr>
<tr>
<td>Audio</td>
<td>Broadcast</td>
</tr>
<tr>
<td>Video</td>
<td>Recorded Video</td>
</tr>
<tr>
<td>Type: Digital</td>
<td></td>
</tr>
</tbody>
</table>

**Instructional Television (ITV)**

- Supports audio and video
- Used for lessons and instruction
- Delivers content to students
- Can be recorded and played back

**Correspondence**

- Sends written materials to students
- Students respond through mail
- Formats include textbooks, test packets, and worksheets

**CBIT (Computer-Based Instructional Technology)**

- Uses computers and educational software
- Delivers lessons and assessments
- Requires student interaction

**Audiovisual**

- Uses audio and visual media
- Can include videos, audio, and text
- Delivers content to students

**Mobile Devices**

- Includes smartphones, tablets, and laptops
- Delivers content to students
- Can be used for class presentations and assignments

**Audio/Visual**

- Includes audio and visual components
- Can be integrated with other delivery systems

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**Notes:**
- Two-way audio is normally required for interactive lessons.
- ITV is a subset of instructional television.
- CBIT involves the use of a computer and software.
- Audiovisual systems provide a rich multimedia experience.

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**References:**
- Educational Technology: Principles and Practice
- Instructional Design: A Comprehensive Guide
Wednesdays, 9:00 AM-3:00 PM

WEDNESDAY

PRESIDENT'S MEETING

PLEASE REMEMBER:

- Attendance is mandatory.
- Dress code: Business casual.
- Refreshments will be provided.

If you have any questions or concerns, please contact the administrative assistant.

Sincerely,
[Signature]

[Date]
A classical learning environment provides synchronous communication to the remote student, thereby supporting content review and feedback on response. The discussion and guided learning strategies are also supported. However, these strategies may not be effective for all students, especially those with different learning styles or disabilities.

### Appropriate Instructional Strategies

**Augmented Reality (E-textile/Whiteboard)**

- Discussion
- Lecture/Recitation (lecture)

**Audio Conferencing**

- Telephone
- Videophone
- Web conferencing

**Computer-Based Instruction (CBI)**

- Simulation
- Programming
- Case studies
- Check/feedback

### Weaknesses

- CD does not provide for instructor-directed, directed environment.
- CD is not interactive for the student.
- Handouts are not distributed.

### Analog Devices

- Handouts are not distributed.
- Handouts are not distributed.

### Appropriate Instructional Strategies

**Weaknesses**

- Limited to one interaction only.
- Does not support lectures.

**Strategies**

- Audio conferencing
- Web conferencing
- Web conferencing
- Web conferencing

### Strengths

- Interactive learning environment provides synchronous communication to the remote student, thereby supporting content review and feedback on response.
It can also provide high levels of synchronous real interaction and immediate feedback. However, the setup and delivery of classroom environments may not always be practical, especially for remote or hybrid learning environments. The use of audio-visual technology, such as recorded audio (e.g., CD, MP3, or podcast), offers a variety of instructional strategies that can be utilized in the classroom environment.

Institutional Television (ITV)

<table>
<thead>
<tr>
<th>Appropriate Instructional Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Lecture</td>
</tr>
<tr>
<td>- Case Studies</td>
</tr>
<tr>
<td>- Drill and Practice</td>
</tr>
<tr>
<td>- Preparation/Registration</td>
</tr>
</tbody>
</table>

Weaknesses:
- Lack of graphics or video limit its use for many instructional purposes.
- Distribution medium that can result in easily dispersed content.
- Copyright issues prevent the free distribution of materials.

Strategies:
- Recorded audio (e.g., CD, MP3, or podcast).
- Interactive simulations and drills.
- Case studies and real-world scenarios.

Appropriate Instructional Strategies

| - Demonstration |
| - Simulation |
| - Drill and Practice |

Send tests to questions despite the distance between instructor and students.

Correspondence (print)
### Video Teleconferencing (VTC)

<table>
<thead>
<tr>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions</td>
</tr>
<tr>
<td>Simulation</td>
</tr>
<tr>
<td>Communication</td>
</tr>
<tr>
<td>Discussion</td>
</tr>
<tr>
<td>Case Studies</td>
</tr>
<tr>
<td>Observation/Description (lecture)</td>
</tr>
</tbody>
</table>

**Appropriate Instructional Strategies**

- When compared to print, reading aloud of text results in reduction of comprehension and speed.
- Students who read silently recall as well as students who read silently.
- Students who read aloud have a higher 
  comprehension.
- Students who read aloud have a higher 
  recall.
- Students who read aloud have a higher 
  retention.
- Students who read aloud have a higher 
  engagement.

**Weakness:** As with the synchronous version, VTC is not as engaging as synchronous WEBT.

### Synchronous Web-based Instruction (WEBT)

<table>
<thead>
<tr>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Tutorials</td>
</tr>
<tr>
<td>Video Lectures</td>
</tr>
<tr>
<td>Simulations</td>
</tr>
<tr>
<td>Discussions</td>
</tr>
<tr>
<td>Case Studies</td>
</tr>
<tr>
<td>Reflection</td>
</tr>
</tbody>
</table>

**Appropriate Instructional Strategies**

**Strengths:**
- Students are exposed to a variety of instructional methods.
- Learners are engaged in active learning.
- Learners have access to a wide range of instructional materials.

**Weaknesses:**
- Students may feel isolated or disconnected.
- Students may struggle with technical issues.
- Students may have difficulty understanding the material.

### Satellite-Learning

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V. Instructional Strategies Supporting Distance Learning

The instructional strategies described have proven to be effective in preparing the

1. Drill and Practice
2. Demonstration
3. Guided Discovery
4. Role Playing
5. Maintenance/Reinforcement (Recap)
<table>
<thead>
<tr>
<th>Memory</th>
<th>Drill &amp; Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge from working memory to long-term memory.</td>
<td><strong>Case Studies</strong></td>
</tr>
<tr>
<td>Problem-solving strategy similar to simulation that works by prescribing a real situation.</td>
<td><strong>Modelling</strong></td>
</tr>
<tr>
<td>For solving a problem, number of ideas in order to find an effective method.</td>
<td><strong>Brainstorming</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instructional Strategies for Distance Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imagery</td>
</tr>
<tr>
<td>Real-world examples.</td>
</tr>
<tr>
<td>Depicts abstract concepts with concrete, palpable environmental experiences of an actual situation.</td>
</tr>
<tr>
<td>A simulation creates a realistic observation of minimal real-world and allows for replaying.</td>
</tr>
<tr>
<td>Realistic feedback, and answer questions.</td>
</tr>
<tr>
<td>May discuss material more in-depth, share insights, and provides detailed feedback.</td>
</tr>
<tr>
<td>Supports a synchronous, direct exchange.</td>
</tr>
<tr>
<td>Guided discussion</td>
</tr>
<tr>
<td>Role playing</td>
</tr>
<tr>
<td>Demonstration</td>
</tr>
<tr>
<td>Lecture</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>Strategies</td>
</tr>
<tr>
<td>Instructional Support</td>
</tr>
</tbody>
</table>

Table 3
In blended learning, the selection of media is crucial. When selecting the most applicable type of media, consider the following:

- The nature of the course objectives
- The type of content being presented
- The target audience
- The learning objectives
- The constraints of the environment

When developing a blended learning solution, it is important to integrate a variety of media types to cater to different learning styles. This includes synchronous and asynchronous media, to ensure that the learning experience is comprehensive and engaging.

The flexibility of blended learning is evident in Figure 4.

Learning approaches vary, and it is important to select the most effective media type for each course. By integrating a variety of media types, such as audio, video, and interactive activities, a blended learning solution can be designed to meet the diverse needs of students.
### INSTRUCTIONAL MEDIA SELECTION

#### VIS Distance Learning Instructional Media Selection

<table>
<thead>
<tr>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill &amp; Practice</td>
<td>Modeling</td>
</tr>
<tr>
<td>Inference</td>
<td>Assignment</td>
</tr>
<tr>
<td>Simulation</td>
<td>Discussion</td>
</tr>
<tr>
<td>Demonstration</td>
<td>Participation</td>
</tr>
<tr>
<td>Lecture</td>
<td>Case Study</td>
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</tbody>
</table>

#### Delivery Issues to Consider:
- TV/monitor, display devices, servers/computers
- WAN/LAN system/nectivity
- Video equipment
- Audio equipment
- Delivery - hardware and supplies
- Availability of existing infrastructure
- In-house vs. outsourcing
- Cost
- Audience size distribution

#### Some Instructional Issues that must be Considered:
- Instructional strategies: Complexity of content, rate of content change
- Level of interaction (direct/remote/delayed)
- Effectiveness assessment and measurement tools
- Identification of knowledge and skill gaps

#### Figure 6

**Symmetry of Interaction & Instructional Strategies**
The presentation of instructional objectives is a key component of instructional design. The type of instructional media selected can significantly impact the learning experience. It is important to consider the target audience, learning objectives, and the context in which the instruction will be delivered. This involves selecting the most appropriate media and considering factors such as accessibility, interactivity, and engagement. Throughout this guide, the focus on instructional media selection has been on the design, implementation, and evaluation of effective learning experiences.
About the Authors