# Learning Strategies for Multi-Media Instruction

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**Abstract:** Multimedia instruction must follow instructional design principles that are based on learning theories. This session will share an effective model for designing learning materials and will describe the strategies that should be used when designing multi-media learning materials.

## Pre-instructional Activities

Before teaching new materials to students, the lesson must overview the materials so that students can form a mental set for the materials and become motivated to learn the materials. The different types of pre-instructional activities include content map, advance organizer, pre-test, learning objectives, and rationale.

## Prepare Learning Activities

Conventional instructional methods tend to use passive instructional strategies. It is important to use strategies that will keep students active so that they will be motivated and will process the information in greater depth. To encourage active learning, it is important to use discovery strategies so that students can find out things for themselves. Instead of teaching a large amount of information to students, we should give students the task and then guide them to find and apply the information. Multi-media and on-line instruction are excellent methods to promote active learning.

### Elaborative Strategies

To make the instructional process more effective and efficient, the lesson must provide activities for students to process the content at a deep level. The deeper the information is processed, the better it is learned or remembered. As a result, the instruction should contain elaborative strategies to help facilitate deep processing. Some common elaborative strategies are asking questions during the instruction, ask students to summarize segments of the instruction, requesting students to make their own notes, and asking students to underline or highlight important information. The elaboration process facilitates efficient storage in long-term memory. This is important since the ease of retrieval will depend on the way the information is stored in long-term memory.

It is known that when new learning materials are encountered, they are attended to and transfer to short-term memory storage. After entry into short-term memory, the information must be transferred to long-term memory immediately since short-term memory has limited capacity. As a result, students should be given the opportunity to elaborate on small segments of instruction so that the materials can be transferred to long-term memory immediately.

### Presentation Strategies

Most instruction is done in an expository fashion where the learning material is presented in its final form to students. The most common expository methods are rote, inductive, and deductive learning.

The rote method consists of presenting the materials to students and then asking them to recall the materials as presented. For example, the lesson may present a rule and then ask students to recall it. The deductive method occurs when students are given a rule followed by examples to explain the rule. The inductive method involves giving examples on a certain rule followed by the rule. However, to make learning more efficient and effective, discovery strategies must be used. With the introduction of new instructional technologies and multi-media, it is possible to design instruction that contains discovery strategies.

## Practice Exercises

Another important component of instruction is practice with feedback. After the presentation of the materials, students should be given the opportunity to practice what they have learned so that they can get feedback on how they are performing and at the same time prepare them for the final test in the lesson. In addition, the practice test acts as a good learning strategy since test questions usually consist of general ideas which act as cues to recall specific details and skills.

## Summarize the Lesson

After the lesson is presented to students, they should be given a summary so that they can get a sense of closure for the lesson and gives a general review of the lesson.