

# **Application of the Events of Instruction in the Gagné-Briggs ISD Model: A Design Example in Language Instruction**

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## **Abstract**

The Gagné-Briggs instructional systems design (ISD) model is a comprehensive model that provides several important conceptual frameworks for both instructional design and instructional research. Teachers in different subject areas including language education can use the conceptual frameworks to design or examine their teaching. One of these frameworks is the events of instruction that correlates to the cognitive learning process. The nine instructional events represent a complete instructional sequence starting from gaining attention and ending with enhancing retention and transfer. This paper provides a practical review of the events of instruction by demonstrating how they are applied to an example of language instruction design.

Evolved over many years and as “the first major attempt to integrate a wide range of knowledge about learning and instruction into an instructional theory” (Aronson & Briggs, 1983), the Gagné-Briggs instructional systems design (ISD) model is regarded by many as the most established and comprehensive instance among the many ISD models. The Gagné-Briggs ISD model was built upon four foundation constructs (Smith & Ragan, 2000; Gagné, Wager, Golas, & Keller, 2004): (1) Learning outcomes can be categorized into a variety of types; (2) Learning outcomes in the intellectual skills domain with prerequisite relationship can be represented as a hierarchy to guide the sequencing of their instruction; (3) Acquisition of different types of learning outcomes requires different conditions of learning (Gagné, 1977); (4) Events of instruction can be designed to support conditions of learning.

## Events of Instruction

Many recommended procedures are available for teachers to structure and sequence instructional activities. David Ausubel's advance organizer is a well-known example (Ausubel, 1960; Smaldino, Russell, Heinich, & Molenda, 2004). Ausubel recommends that overview information, i.e., an advance organizer, should be presented at the beginning of instruction. Teachers should prepare advance organizers with the aim to help students organize and interpret new learning, as well as linking new learning with what students learned in the past.

The "Tell me, show me, let me." guideline is popular among trainers in business and industry (Horton & Horton, 2001). This guideline advises teachers to not only present knowledge content to students (tell me), but also demonstrate how the knowledge can be used (show me) and give students an opportunity to practice applying the knowledge and monitor students' performance (let me).

The events of instruction specified in the Gagné-Briggs ISD model are an elaborated sequence of instructional activities designed to create favorable conditions of learning. The nine events are described below in the usual sequence as they would occur in a complete session of instruction (Aronson & Briggs, 1983; Gagné, Wager, Golas, & Keller, 2004):

*Gaining attention.* There is no question that the very first task in instruction is to gain students' attention. Two methods often employed to achieve this purpose are using stimulus change and appealing to students' interests. Keller (1983) summarizes the interest strategies for arousing students' curiosity.

*Informing students of objectives.* This is now a practice accepted by many textbook and e-learning authors to list at the beginning of an instructional unit the expected learning outcomes of the unit. Teachers ought to do this in classrooms as well. Informing students of learning objectives at the beginning of instruction helps the students set up expectation for their learning. Relevance between the objectives and the students' goals or interests motivates the students to learn.

*Stimulating recall of prerequisites.* This event serves to review, and thereby maintain, previously learned outcomes relevant to the new learning. More importantly, the event supports the learning of the new instruction. Teachers can stimulate recall of prerequisite learning by asking questions and let students produce the answers.

*Presenting new content.* This is the core event of instruction and the dominant event in many classrooms. In modern teaching, media selection is an important step in this event as oral presentation may not be the most effective mode of delivery of the content. Suitable instructional strategies vary depending on the type of learning outcome expected.

*Providing learning guidance.* This event provides supportive information or activities to ensure that students understand and remember the new content. For example, in interpreting a long sentence, the teacher may break the sentence up into smaller parts and pointing out the

relationship among the parts to allow students to better comprehend the sentence.

*Eliciting performance.* This event provides an opportunity for students to practice what they have learned. The practice should be related to the instructional objectives, and should not be too difficult, preferably similar to the examples that the teacher has covered.

*Providing feedback.* Feedback must be provided for students' practices, not merely about correctness or degree of correctness of practice performance. Feedback should be informative in explaining the reasons behind the teacher's assessment of practice, and how to improve the performance.

*Assessing performance.* This is the summative evaluation of students' learning. The assessment should be valid in that it measures whether students have attained the learning outcome that is congruent with the instructional objectives.

*Enhancing retention and transfer.* Learned outcomes are not useful if students do not retain the outcomes or cannot apply them to new situations. A number of strategies are available for this event. The strategies should be selected for their appropriateness for a particular type of learning outcome. For example, spaced reviews are useful for learning of concepts and rules, but opportunities of working on novel problems are needed for learning of problem solving.

## **Relations to Processes of Learning**

Gagné's identification of the nine events of instruction is congruent with the aim to facilitate the internal conditions of learning based on the information processing model of human cognition (Gagné, 1977; Gagné, Wager, Golas, & Keller, 2004; Gagné & Driscoll, 1988). Gaining attention makes students direct their reception of patterns of neural impulses corresponding to the teacher's instruction. Informing students of objectives activates a process of executive control to support the cognitive process of learning. Stimulating recall of prerequisite learning helps students retrieve prerequisite information learned in the past into working memory (short-term memory) to be integrated with new information. Presenting new content should emphasize features for selective perception to facilitate input into students' working memory. Providing learning guidance aids the semantic encoding process that supports long-term retention. Eliciting practice performance activates a response organization to generate the performance. Providing feedback establishes reinforcement of the learning. Assessing performance activates retrieval of the learned capability and provides students with further reinforcement. Finally, enhancing retention and transfer provides cues and strategies for future retrieval of the learning outcome.

## The Fog Index of Readability

The author chose the Fog Index of readability as the subject to provide an example of applying the events of instruction to instructional planning. Robert Gunning devised the Fog Index in 1968 to measure the readability of a sample of English writing (Lee & Owens, 2004; Wikipedia, 2008). The measurement outcome is expressed as a number. This number indicates the number of years of formal education that a person needs to have in order to comprehend the writing easily. For example, if the Fog Index of an English passage is 12, the readability level of the passage matches the reading ability of a U.S. high school senior.

The procedure of determining the Fog Index is simple. First, select a representative sample of text of one or two paragraphs from the English writing to be analyzed. Calculate the average sentence length of the sample in number of words. Calculate the percentage of difficult words in the sample. The Fog Index is equal to (average sentence length + percentage of difficult words) \* 0.4.

Difficult words for the Fog Index are defined as words of three or more syllables or words ending with *ly* or *ing*. There are exceptions as follows. (1) Capitalized words are not counted as difficult; (2) Combinations of short words, such as *vice-chairman*, count as one word; (3) Verb forms made into three syllables by adding *-ed* or *-es* are not counted as difficult.

The author used the nine events of instruction as a guiding framework to structure and plan the teaching of the Fog Index. The result is shown in Table 1 below.

**Table 1**

*Instructional Plan for Teaching the Fog Index of Readability Using the Events of Instruction in the Gagné-Briggs ISD Model*

<b>Instructional Event</b>	<b>Instructional Outline</b>
Gaining attention	Give students three English paragraphs of different readability levels. Ask students to rank the paragraphs by reading difficulty in groups, and discuss why the paragraphs are of different levels of difficulty. Have a representative from each group orally report their conclusion to the class.
Informing students of objectives	Tell students that they will learn to determine readability of English writing with the Fog Index in this class.
Stimulating recall of prerequisites	Review the concepts of syllable, average, and percentage with students.
Presenting new content	Present and explain the formulas for calculating the Fog Index of English writing, and walk students through the calculation of the Fog Index of one of the three paragraphs provided at the beginning of the class.
Providing learning guidance	Ask students to figure out the reasons behind the exceptions of the difficult words as defined in the Fog Index.
Eliciting performance	Have students practice calculating the Fog Indexes of the two remaining paragraphs provided at the beginning of the class.
Providing feedback	Show students the intermediate and final results of the Fog Index calculations of the two paragraphs, and check and discuss discrepancies in students' calculations.
Assessing performance	Give a quiz to calculate the Fog Index of a new English paragraph.
Enhancing retention and transfer	Encourage students to use concepts of the Fog Index to improve their writing, and give an assignment to check readability of the content from their English textbooks in past grades.

## **Conclusion**

The events of instruction are an important component of the Gagné-Briggs ISD Model. In the model the events constitute a framework for anchoring various instructional strategies. The design of the events is consistent with the support of cognitive processing of human learning and performance. This paper shows that the events can easily be used as a structuring tool for instructional planning. Furthermore, the events of instruction can also be used to examine existing instructional plans to see if any activities should be altered or added. Researchers can also use the events to organize and classify instructional strategies.

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# 應用 Gagné-Briggs 教學系統設計模式中的教學事件： 以語言教學課的設計為例

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## 摘要

Gagné-Briggs 教學系統設計模式是一個極其完整的模式，給教學設計和教學研究提供了若干重要的概念架構。包括語言教育在內的不同學科教師可以應用這些概念架構來設計或檢討他們的教學。其中一個概念架構是與認知學習過程息息相關的教學事件，這九類教學事件代表了完整的教學程序，始於獲得注意而終於強化記憶和遷移。本文藉由應用教學事件設計語言教學的實例，提供了教學事件的實用性說明。