A PEDAGOGICAL APPROACH OF INSTRUCTION:
THE LOGICAL ASPECTS IN PERSUASION

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INTRODUCTION

The purpose of this study is to compose an instructional resource in the logical aspects of persuasion – evidence and reasoning, which can be utilized as supplementary materials in a college level course in communication and English in Japan. The content of this resource will be useful for students both when they construct effective persuasive messages and when they evaluate arguments in persuasive messages. Due to the cultural background of the author as well as the references applied in this study, the primary focus of this resource is on the persuasion of American persuadees by Japanese persuaders.

The author defines the term, ‘persuasion’ used in this paper as “communication that attempts to influence the intended receiver’s choice in beliefs, attitudes, intention, and behavior.”

The content begins with an overview of the nature and the importance of reasoned discourse. Then the nature of evidence in persuasion are discussed. Next, five major types of evidence are considered: specific instances, statistics, exhibits, presumptions, and testimony. Finally, four basic techniques of reasoning are discussed: generalization, analogy, causal relationships, and sign reasoning.

The method of organizing the content was to integrate the factors of American logics in communication into the pedagogical form of a curriculum guide, which consists of five parts: 1) instructional objectives, 2) content outline, 3) learning activities, 4) instructional assessment, and 5) the references of instruction. The format of a curriculum guide applied in this study is taken from the one developed by Allen, Wilmington, and Sprague in their book Speech Communication in the Secondary
This format is widely used in actual communication education in many American high schools as well as fundamental courses at colleges. The content in this resource was taken mainly from the field of speech communication.

STRUCTURE OF THIS INSTRUCTIONAL RESOURCE

This resource of instruction consists of five parts as the pedagogical form of a curriculum guide. The first part includes instructional objectives that give a specific statement of what the student should be able to do as a result of the learning experience. The second part involves a content outline, which provides a survey of the essential information that the student should learn. The third part is the learning activities, which specify what the student will do in order to master the specific skills of the content. The fourth part involves instructional assessment, which suggests how student learning may be evaluated. The final part involves a list of the references of instruction that the teacher may consult for additional materials for the development of the instruction.

Most instructional objectives and learning activities in this instructional resource are constructed in behavioral terms at six cognitive levels of learning, as is widely used in American high schools and college courses of communication. The first level is recall, in which the student recognizes and recalls information learned. The second level involves comprehension, in which the student summarizes, explains, or paraphrases the information learned. The third level deals with application. In this level the student will be asked to use the new information in a different context or in a particular, concrete situation. The fourth level deals with analysis. Here the student must apply previously learned knowledge to analyze an instance of the phenomenon in question. The fifth level involves synthesis. Here the student must combine the elements learned. The last level is evaluation, in which the student must assign a value to standards that they
will justify. These six cognitive levels are generally arranged in a hierarchical order, which builds from the less difficult to the more difficult.

**INSTRUCTIONAL OBJECTIVES**

I. Instructional objectives for the nature and importance of reasoned discourse in persuasion.
   A. Without using notes, the student should be able to identify the nature and importance of reasoned discourse in persuasion.
   B. Given a work sheet, the student should be able to identify as true or false statements about the nature of reasoned discourse in persuasion.

II. Instructional objectives for the studying functions of evidence in persuasion.
   A. Without using notes, the student should be able to identify four functions of evidence in persuasion.
   B. Given a work sheet, the student should be able to identify as true or false statements about the functions of evidence in persuasion.

III. Instructional objectives for studying types of evidence.
   A. Without the use of notes, the student should be able to identify five major types of evidence.
   B. Given a work sheet, the student should be able to match correctly five types of evidence with descriptions of those types.
   C. Given some sentences, the student should be able to identify those that contain evidence.
   D. The student should be able to analyze the use of evidence in sample speech fragments.
   E. The student should be able to support a proposition by using three different kinds of evidence.
   F. The student should be able to evaluate in terms of potential persuasiveness and quality the evidences utilized
in the speeches of peers.

IV. Instructional objectives for studying forms of reasoning.

A. Without using notes, the student should be able to identify four basic forms of reasoning.

B. Given a work sheet, the student should be able to match correctly the forms of reasoning with descriptions of those forms.

C. Given some statements, the student should be able to identify those that contain argument through reasoning.

D. The student should be able to analyze the appropriateness of reasoning employed in given sample statements.

E. The student should be able to construct and present to the class an argument using one or more forms of reasoning.

F. The student should be able to evaluate peer presentations in terms of persuasiveness and quality of reasoning utilized in the arguments.

CONTENT OUTLINE

I. The Nature and Importance of Reasoned Discourse in Persuasion

A. Audiences respond to persuasive messages according to what they believe to be true more than from what is actually true. Therefore, the message should be constructed to meet audience's standards of reasonableness, along with adapting to the motives, attitudes and emotional needs of an audience.²

B. The use of reasoned discourse in persuasion is important for the following five basic reasons.³

1. Reasoned discourse has prestige value: People tend to regard reasoning ability in discourse as a sign of high intelligence.

2. Reasoned discourse serves as an antidote to high emotion and helps the audience to perceive the value of sound evidence and valid reasoning.
3. Reasoned discourse has more lasting effects: A well established reason may be remembered long after the actual discourse, while emotion may have been forgotten.

4. Reasoned discourse tends to resist refutation: A well established argument through reasoning will function as a burden to the opposition.

5. Reasoned discourse has the power to resolve conflict. It will influence the audience to arrest or suspend judgement and look for the facts, and then lead the audience to a better decision.

II. Functions of Evidence in Persuasion

Using evidence is helpful in persuasive messages for the following four main reasons.

A. When the persuader has low credibility with his/her audience, evidence helps to increase the persuader’s credibility.⁴

B. When audience attitudes are initially extreme, the uses of evidence may help attitudes change regardless of the initial credibility of the source.⁵

C. Evidence may serve as an inhibitor against subsequent counterpersuasion.⁶

D. Specific factual evidence especially helps to increase an audience’s perception of the expertness and trustworthiness of the persuader.⁷

III. Types of Evidence

The persuader should prepare evidence before formulating his/her message and should consider three major criteria in discovering evidence, which include relevance, reliability, and availability.⁸ There are five major types of evidence: specific instances, statistics, exhibits, presumptions, and testimony.

A. Specific instances: These commonly involve examples or illustrations. Both examples and illustrations are useful in establishing generalizations and in illustrating a
general principle once established. For example, an article in *Time*, March 30, 1981, used specific instances to dramatize the impact of Japanese automobile imports in the American automobile industry.

“Businessmen are getting the message. After years of smiling while armies of Japanese executives trooped through their offices to learn the secrets of U.S. industry, Americans are seeking a tip or two for themselves. Like pilgrims to the temple of success, they are traveling to an ancient land they can scarcely understand to learn how Japan does it. With a mixture of curiosity and envy they are asking: How has an overpopulated island country with less land than California leaped in only three decades from wartime defeat and the status of industrial sweatshop to that of high-technology dynamo? How has a country that imports 100% of its aluminum, 99.8% of its oil, 98.4% of its iron ore and 66.4% of its wood and lumber become a world economic power?”

B. *Statistics*: Statistics provide both perusader and audiences with a means for talking about a large number of specific instances without citing everyone. In this sense, statistics may be perceived as a compact form of specific instances using numbers. Statistics can be used in many ways as evidence. In the following example, statistics are used to judge the Balance of Power.

“The Stockholm International Peace Research Institute, in its 1976 Yearbook, reports that in the past ten years, while we have added no new missile launchers, the Russians have far outdistanced us. The figures show that in 1976 the U.S. had 1,054 land-based ICBMs, while the Soviet Union had 720. As of June, 1976 we had 1,054; the Soviet Union had over 1,500. In 1967 the U.S. had 656 submarine launched ballistic missiles; the Soviet Union had 27. In 1976, the U.S. had 656, and the Soviet Union had more than 700!”
C. **Exhibits**: In face-to-face persuasive communication, the persuader can use things as evidence that can actually be seen, heard, touched, or tasted by the audience. Such factual evidence includes artifacts, photographs, tape and video recordings, samples of handwriting, etc. In the courtroom, especially, exhibits are called real evidence, and are distinguished from personal evidence given by word of mouth.\(^{13}\)

D. **Presumptions**: Presumptions are predictions based upon things experienced many times in the past and judged so probable that they are accepted without demanding proof. For example, "The sun will rise tomorrow morning" is accepted as a true statement although no one has ever experienced directly tomorrow morning's sunrise.\(^{14}\)

E. **Testimony**: Testimony relies upon the credibility of the source cited. The primary strength of testimony is its capacity to add the credibility of another to the argument. In this sense, testimony may be able to stand alone as argument by authority. Since audiences tend to respect and accept the testimony of the experts, expert testimony may be used as effective evidence for psychological reasons. The persuader, however, should seek out more substantial evidence to use as logical proof when it is needed.\(^{15}\) Testimony can be used in many ways as evidence. In arguing against busing as a means of effecting integration, a student speaker observes:

"Yet another put-down on the wonders of integration was voiced by David Armor, a senior social scientist at the Rand Corporation, in an article based on a study of six northern cities. His conclusion: 'Blacks did not attain educational gains as a result of busing programs, though such gains had been anticipated.' Howard Filieger, editor of the *U.S. News and World Report*, restates my central theme, and elaborates on its consequences: No reasonable person can challenge the goal of eradicating
racial differences that divide Americans. But no matter how one feels about the goal of forced busing, there is no doubt that the means has inflicted hardships on children and their families; it has not ended classroom separation of the races; it has not raised the level of public education: nor has it increased voluntary integration. There must be a better way.”

N. Forms of Reasoning

Reasoning is the process of inferring conclusions from evidence. Two of the main forms of reasoning are inductive and deductive. Inductive reasoning is the process of moving from specific cases to a generalization about all such cases within the same classifications. Deductive reasoning is the process of moving from a generalization to a specific case within a given classification. In actual persuasive communication, reasoning may move from induction to deduction to induction, and back and forth many times as the persuader develops an argument. Four of the basic forms of reasoning are generalization, analogy, causal relationships, and sign.

A. Reasoning by generalization: Reasoning by generalization arranges a series of instances and from them claims a general principle. This process may be diagrammed in the following manners:

```
Instances 1
Instances 2
Instances 3
Instances 4

→ General Principle
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For example:

Evidence: George, Tom, Mike, Susie, and Janet are all college students who can solve this problem.

Claim: A large percentage of college students are probably able to solve this problem.

Warrant: These students are typical of most college students.

B. *Reasoning by analogy:* Reasoning by analogy consists of making a comparison between two similar cases, and inferring that what is true in one case is true in the other. This is a form of inductive reasoning in which the persuader seeks to show that the factors in his/her analogy are either a cause or sign of the conclusion he/she presents. This process may be illustrated in the following manner:

\[
\begin{array}{c}
\text{A} \quad \text{C} \\
\uparrow \\
\downarrow \\
\text{B b} \\
\text{B x}
\end{array}
\]

A, B, b, and C are known. x is unknown. The solid lines represent a known relationship. The dotted line indicates an unknown relationship.\(^{19}\)

For example:

Evidence: The raising of tuition at University A reduced the number of student enrollments.

Claim: The raising of tuition will probably reduce the number of student enrollments at University B.

Warrant: University A is similar to University B in essential respects.
C. *Causal reasoning*: In causal reasoning, the persuader seeks to show why his/her proposition is valid. This involves either cause-to-effect or effect-to-cause reasoning, and usually involves generalization. In this reasoning one infers that a certain factor (a cause) is a force that produces an effect. This process may be diagrammed in the following manner:

\[
\text{Cause} \quad \rightarrow \quad \text{Effect}
\]

\[
\text{(inferred)}
\]

\[
\text{(unknown)}
\]

For example:

- **Evidence:** Person A eats too much.
- **Claim:** Person A will become obese.
- **Warrant:** Those who eat too much are prone to obesity.

The same process may be used in reverse. If an effect is known to exist, it may be reasoned that it was produced by a cause. This process may be diagrammed in the following manner:

\[
\text{Effect} \quad \leftarrow \quad \text{Cause}
\]

\[
\text{(known)}
\]

\[
\text{(inferred)}
\]

For example:

- **Evidence:** Person A is obese.
- **Claim:** Person A eats too much.
- **Warrant:** Those who eat too much are prone to obesity.

D. *Sign reasoning*: Sign reasoning consists of inferring
relationships or correlations between two variables. This reasoning may be used when two variables are so related that the presence or absence of one may be taken as an indication of the presence or absence of the other. This process may be illustrated in the following manner.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Attribute</th>
</tr>
</thead>
</table>

In this reasoning the persuader may reason either from the attribute to the substance or from the substance to the attribute. The relationship between the variables is usually reciprocal.²¹

For example:

**Evidence:** Many people are waiting at the bus stop.

**Claim:** The bus must be late.

**Warrant:** Large crowds at a bus stop are a sign that the bus is late.

**LEARNING ACTIVITIES**

I. Activities related to the study of nature and importance of reasoned discourse in persuasion.

A. The instructor will tell the students about the nature and importance of reasoned discourse in persuasion, emphasizing the points developed in Part I of the Content Outline.

B. Following the lecture, the instructor will ask the students to identify the nature of and the five important factors of reasoned discourse in persuasion that were discussed. The answers may be given orally.
C. Have the students identify as true or false statements about the nature and importance of reasoned discourse in persuasion. A sample work sheet follows:

Q: Place a ‘T’ next to true statements and an ‘F’ next to false statements about the nature and importance of reasoned discourse in persuasion.

1. The persuader should organize his/her reasoned discourse according to his/her own standard of truth or reasonableness to be true.
2. Reasoned discourse has more lasting effect than emotionalized discourse.
3. Reasoned discourse can be an antidote to high emotion.
4. Reasoning is not an effective way to solve conflict.
5. Reasoned discourse has prestige values.
6. Reasoned discourse is easy to refute.

The answer should be 1-F, 2-T, 3-T, 4-F, 5-T, and 6-F.

II. Activities related to the study of evidence in persuasion.

A. The instructor will tell the students about the functions of evidence in persuasion as identified in Part II of the Content Outline.

B. Following the lecture, the instructor will ask the students to identify four main reasons why evidence is helpful in persuasive discourse. The answers may be given orally.

C. Have the students identify as either true or false descriptions about the functions of evidence in persuasion. A sample work sheet follows:

Q: Place a ‘T’ next to true statements and an ‘F’ next to false statements about the nature of evidence in persuasion.

1. Evidence may not serve as an inhibitor against subsequent counter-persuasion.
2. When the persuader has low credibility with his/her
audience, evidence will help to increase his/her credibility.

3. Specific factual evidence especially will help to increase expertness and trustworthiness of the persuader.

4. When audience attitudes are initially extreme, the use of evidence may not help attitude change.

The answer should be 1-F, 2-T, 3-T, and 4-F.

III. Activities related to the study of the types of evidence.

A. The instructor will tell the students about five major types of evidence, emphasizing the points developed in Part III of the Content Outline.

B. Following the lecture, the instructor will ask the students to identify the five major types of evidence that were discussed. The answers may be given orally.

C. Have the students match the five types of evidence with descriptions of those types. A sample work sheet follows:

Q: Match the types of evidence with their appropriate descriptions.

1. Testimony
2. Exhibits
3. Specific instances
4. Presumptions
5. Statistics

a. They are used whenever an argument involves the giving of examples and illustrations.

b. They provide a means for talking about a large number of specific instances without citing every one.

c. They rely upon the credibility of the source cited.

d. They are predictions based upon things experienced many times in the past, and judged so probable that they are accepted without demanding proof.
e. They may be used as things that can actually be seen, heard, touched, or tasted by the audience. The answer should be 1-c, 2-e, 3-a, 4-d, and 5-b.

D. Have the students place a check mark next to those statements from the following list that involve an evidence in reasoned discourse.

1. Tom and Susie, members of the Hoofer Sailing Club, are good sailors.
2. Jim probably knows how to swim well.
3. The store may be able to sell more goods next year.
4. Inflation will be stopped next year.
5. The store increased the amount of goods sold this year by 50% over last year.
6. A famous economist said that the President's economic policy will stop inflation soon.
7. This policy will solve the problem by the end of this year.
8. This picture clearly shows the scene of a hit and run auto accident.

The answers should be 1, 5, 6, and 8.

E. Have the students analyze the uses of evidence in sample speech fragments. A sample work sheet follows:

Q: Analyze the use of evidence in the following speech fragments:

1. "Former associate justice of the United States Supreme Court, Abe Fortas, brings Thoreau's ideas in civil disobedience into a contemporary light. He wrote: '(Dr. Martin Luther King) said that many Negroes would disobey unjust laws.' These he defined as laws which a minority is compelled to observe, but which are not binding on the majority. He said that this must be done openly and peacefully, and that those who do it must accept the penalty imposed by the law."
2. "At the same time, we are reducing taxes permanently by increasing the standard deduction, which most taxpayers claim. A family of four earning $10,000 will save $123 — to about 20 percent — on next year’s taxes. This will also be a major step toward tax simplification, allowing 75 percent of all taxpayers to take the standard deduction and file a very simple tax return."  

3. "They told the stories of times they had personally raped, cut of ears, cut off hands, taped wires from portable telephones to human genitals and turned up the power, cut off limbs, blown up bodies, randomly shot at civilians, razed villages in fashion reminiscent of Genghis Khan, shot cattle and dogs for fun, poisoned food stocks, and generally ravaged the countryside of south Vietnam in addition to the normal ravage of war, and the normal and very particular ravaging which is done by the applied bombing power of this country."  

4. "These samples of handwriting clearly show that the memo was written by him."

5. "He has been absent and unheard of for a period of seven years. Therefore, we presume that he may be dead at this time."

6. "Before the clouds of fog lifted from Donora, twenty had died, and 6000, or half of the population, were bedridden. Donora was the site of America’s first major air pollution disaster. The concern of public health officials is no longer for small towns like Donora. What happened there in 1948, is now happening in New York City, Los Angeles, and Washington. If New York is struck in the same proportions as was Donora, 12,000 will die, and 4,000,000 will be driven to their beds."

7. "The startling growth in government has been at
the state and local level. Let me give you some examples. In 1960, there were about 5.5 million state and local government employees. By 1975, the figure had more than doubled to 11.7 million employees. That is where the growth has occurred – not in distant Washington, but in the government closest to the people. Let me give you another example.”

8. “Dr. Borlaug said ‘If DDT is banned by the United States, I have wasted my life’s work. I have dedicated myself to finding better methods of feeding the world’s starving populations.’ Without DDT and other important agricultural chemicals, our goals are simply unattainable.”

The answer should be 1–Testimony, 2–Statistics, 3–Specific Instances, 4–Exhibits, 5–Presumtions, 6–Specific Instances, 7–Statistics.

F. Working in small groups, have each group prepare a one minute argumentative speech using at least three different types of evidence. Appropriate topics for the speeches include:

1. Cigarette smoking endangers one’s health.
2. Capital punishment in any form should (or should not) be abolished.
3. Japan’s automobile exports to the U.S. should (or should not) be restricted.
4. Income tax should (or should not) be reduced.
5. Abortion should (or should not) be legally admitted.

G. Following presentation of the speeches, evaluate each group’s uses of evidence in terms of persuasiveness and quality.

IV. Activities related to the forms of reasoning.

A. The instructor will tell the students about four basic forms of reasoning as identified in Part IV of the Content Outline.
B. Following the lecture, the instructor will ask the students to identify the four basic forms of reasoning that were discussed. The answers may be given orally.

C. Have the students match the four basic forms of reasoning with descriptions of those forms. A sample work sheet follows:

Q: Match the appropriate form of reasoning with these descriptions.

1. Causal reasoning
2. Reasoning by analogy
3. Sign reasoning
4. Reasoning by generalization

   a. This reasoning is used when two variables are so related that the presence or absence of one may be taken as an indication of the presence or absence of the other.

   b. This reasoning arranges a series of instances and from them claims a general principle.

   c. This reasoning tries to show why the proposition is valid.

   d. This reasoning consists of making a comparison between two similar cases, and inferring that what is true in one case is true in the other.

The answer should be 1-c, 2-d, 3-a, and 4-b.

D. Have the students place a check mark next to those statements from the following list that involve argument through reasoning.

1. The University of Wisconsin is located at Madison.
2. Power companies put expensive ads in newspapers and are buying off the newspapers. So there will be no opposition to rate increases.
3. The price of gasoline went up more than twice in these four years.
4. Studies show that the majority of Americans support the President’s policy ‘A’. Therefore, the president’s
policy ‘A’ will become legislation.
5. To study foreign language is to study cross-cultural communication.
6. The 1930’s taught us that unchecked aggressive conduct leads to wars. Thus, unchecked aggressive conduct today will lead to war.
7. Since Republicans tell us that they are more dedicated to America than are the Democrats, Republicans have contempt for the American people.
8. Mr. Bush is the President of the United States in 1990.

The answer should be 2, 4, 6, and 7.

E. Have the students identify the forms of reasoning reflected in sample schemes of argument. A sample work sheet follows:

1. Evidence: \[ \text{The construction of a highway in State A reduced the number of auto accidents.} \]
   \[ \rightarrow \text{Claim: The construction of a highway will probably reduce the number of auto accidents in State B.} \]

   \[ \text{Warrant: State A is similar to State B in essential respects.} \]

2. Evidence: \[ \text{Student ‘A’ received a Fullbright scholarship.} \]
   \[ \rightarrow \text{Claim: He must be a very good student.} \]

   \[ \text{Warrant: Only very good students receive Fullbright scholarships.} \]
3. Evidence: He was sick when he took the exam.  
Claim: He probably didn’t do well on his exam.

Warrant: Those who take examinations while they are sick perform badly.

4. Evidence: Ken, Terry, and Tom are members of group ‘A’ which is opposed to proposition ‘B’. 
Claim: Many members of group ‘A’ are probably opposed to proposition ‘B’.

Warrant: They are all typical members of group ‘A’.

The answer should be 1–Reasoning by analogy, 2–Reasoning by sign, 3–Causal reasoning (cause to effect), and 4–Reasoning by generalization.

F. Working in small groups, have each group construct a one minute argumentative speech utilizing at least two different forms of reasoning.

G. The instructor will lead a class discussion evaluating each group’s forms of reasoning in terms of validity and potential persuasiveness of reasoning utilized.

INSTRUCTIONAL ASSESSMENT

I. Student involvement in small group activities may be evaluated, including:

A. the preparation of a one minute argumentative speech using three different types of evidence.

B. the construction of a one minute argumentative speech utilizing techniques of reasoning.
II. A unit test may be administered to assess student understanding of the basic concepts of reasoned discourse in persuasion. Items for the test may be chosen from learning activities at the comprehension, application, and analysis levels. For example, the student may be asked to:
A. Identify as true or false statements about the nature and importance of reasoned discourse and the functions of evidence in persuasion.
B. Match the types of evidence and forms of reasoning with examples of these types.
C. Analyze the uses of evidence and forms of reasoning in sample speech fragments.

REFERENCES OF INSTRUCTION:


NOTES:

* This is a revised version of a paper originally presented at the 20th Annual Convention of the Communication Association of Japan which was held at Meiji University in Tokyo, June 29–July 1, 1990.

3. Ibid., pp. 195–199.
pp. 296–297.
18. Rieke., p. 81.
19. Freeley., p. 120.
21. Ibid., p. 127.