Teaching Critical Thinking Skills in the Public Speaking Course: A Liberal Arts Perspective.

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Noting that while the literature clearly states a need for colleges and universities to teach students critical thinking skills from a liberal arts perspective, this paper points out that there are few descriptions of how these skills can be taught. Using the canons of classic rhetoric, the literature is reviewed to discover the skills that arise from invention, organization, composition, memory, and delivery, and concludes that students need critical thinking skills that will help them expand perspectives, draw themes together, draw conclusions, present organized data consistent with audience expectations, and write in oral style. Labeling these as framing, scenario, prescription, and imagining skills, the paper presents exercises designed to assist students develop each skill within a public speaking course. Finally, the paper offers suggestions for testing critical thinking. (FL)
TEACHING CRITICAL THINKING SKILLS IN THE PUBLIC SPEAKING COURSE: A Liberal Arts Perspective

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ABSTRACT
Though educators and employers agree that students should be equipped with critical thinking skills taught from a liberal arts perspective, the current literature fails to identify the specific content of these critical thinking skills. This essay identifies four critical thinking skills relevant to rhetoric as one of the liberal arts, and suggests a variety of strategies for teaching these skills in the introductory public speaking course.

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ABSTRACT

TEACHING LIBERAL ARTS IN THE BASIC PUBLIC SPEAKING COURSE:
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Though educators and employers agree that students should be equipped with critical thinking skills taught from a liberal arts perspective, the current literature fails to identify the specific content of these critical thinking skills. This essay identifies four critical thinking skills relevant to rhetoric as one of the liberal arts, and suggests a variety of strategies for teaching these skills in the introductory public speaking course.
Though the literature states a clear need for universities and colleges to teach their students critical thinking skills couched in the liberal arts tradition, few authors describe how these skills may be taught. Authors in education and in the professions alike seem indignant that freshmen enter college lacking basic conceptualization skills (how to think about their own thinking), fail to gain essential critical thinking skills during their college careers, and enter the employment scene lacking the problem-solving mechanisms which enhance initiative. These authors seem reluctant to identify what specific critical thinking skills they are talking about and how they could be taught effectively (Carnegie, 1984, p. 3). Using the classic canons of rhetoric, this essay will comb through the tangled array of these critical thinking skills arising from the literature in liberal arts. This sorting has two goals: (1) To learn the specific content of these skills, and (2) To propose teaching strategies for incorporating the same into the introductory speech course in college.

1. PERSPECTIVE ON CRITICAL THINKING AND RHETORIC

In this sorting task, it may help to know how rhetoric fits with the liberal arts. The courses of the university of the Middle Ages were described as "arts": systems of rules for generating knowledge animated by some principle(s) (Mackin, 1969). The liberal arts of languages, and the liberal arts of sciences were complements in this task. The sciences, (the Quadrivium: arithmetic, geometry, astronomy, and music) arranged knowledge into systematic bodies of information, and languages (the Trivium: grammar, logic and rhetoric) discovered
social significance for the products of science. The liberal arts of languages were the means by which materials were discovered for the sciences (Mackin, 1969). Rhetoric was chief among the courses of the Trivium. Rhetoric was the set of critical thinking skills (artes liberales) by which educated persons were liberated from a unicameral perspective of their social environment and by which others were led (educere) into a critical stance of social autonomy.

The classical perspective of the use of the liberal art of rhetoric was a social analysis and synthesis tool by which educated persons persuaded others to accept the fruit of their intellect for the common good (Krantz, 1984; Heath, 1980; Kneupper and Anderson, 1980; Hunt, 1955; Benoit, 1984; Bateman, 1968). If such a tool still has an edge it should be able to help us analyze the literature in liberal arts and form a synthesis of the essential critical thinking skills relevant to our discipline.

2. CATALOGUE OF CRITICAL THINKING SKILLS

What are the critical thinking skills and how do we make sense of them? In the literature, these skills appear as general and ambiguous as the goals of liberal education themselves. However, we gain a clearer picture of these skills when we use the canons of rhetoric as questions, and ask of the literature: do students need skills of invention, organization, composition, memory, or delivery?
2.1 SKILLS ARISING FROM INVENTION

Invention (inventio, heuristic) is the division of rhetoric which focuses on finding significant questions of an issue and discovering the appropriate arguments for proof and/or refutation (Mackin, 1969). Contemporary authors argue that students should have investigation, discovery, criticism, and inference skills (Bradley, 1979; George, 1965; Henderson, 1972). These general skills are specifically those which: (1) generate new perspectives of a problem and (2) those which integrate bits of information into a gestalt. The skills are chiefly questions about deficiency or sufficiency of information surrounding a social decision environment. Skills generating new perspectives are those which answer questions about need for information. What information needs to be imported to this dilemma scene to free the participants from a single view of the problem? What values are operating in this dilemma? How is information limited or expanded by these values? What information are leaders using to make public decisions? What are the competing perspectives and how do these perspectives affect the quality and quantity of information processed by the decision group? Invention skills in this category might be characterized as "frame" questions. The literature argues that students should know how to recognize a given frame of a problem and be able to describe the information included or excluded from the decision scene of that frame (Harris and Thomlinson, 1983; Skolimowski, 1984; Marcus, 1982; Heath, 1980; Hunt, 1955; Oakeshott, 1975; Topping, 1983; Walhout, 1983; Hostettler, 1980).
Information integration skills are those which condense information: How are central issues identified? What are the underlying assumptions of an issue? How does one form a gestalt? How does one search for unity of ideas among diverse thoughts? How does one access masses of stored information and devise categories or arguments to embrace the significance of evidence. We call these, "scenario" skills. The scenario is the "story" of the argument. (Bradley, 1979; Baile, 1979; Brummett, 1984; Delattre, 1983; Hunt, 1967; Kneupper and Anderson, 1980; Farrell, 1983; Hills, 1983; Hogg, 1983; Zigli, 1984). Here the literature would suggest that "framing" information is not enough. Students should also know how to contract or expand the frame to enhance their ability of selecting quality information, much as a photographer adjusts the aperture of the camera lense to give the image a different cast of light. Since over half the U. S. labor force is classified as "information workers" this skill will be important. Graduates will be called upon to access, manage, and provide some rationale for binding disparate information into an accessible whole (Cameron, 1983).

2.2 SKILLS ARISING FROM ORGANIZATION

Dispositio or or organization is the rhetorical act of organizing information by patterns consistent with the image (ethos) of the speaker and the receptivity (disposition) of the audience. Little attention is given this skill in the educational literature (Szladits, 1983; Schramm, 1983). The professional literature, however, states clear needs for this skill. Apparently persons will be more highly
valued in organizations if they know: how to organize ideas, organize difficult topics, and know how to motivate subordinates by helping them to identify with the task at hand (Wolvin, 1984; Munschauer, 1980; Murrin, 1982). We have labeled such skills as "prescription" skills. The student, after creating a scenario of the argument from its divergent parts, should be able to prescribe how the argument may be partitioned to benefit both the speaker and the audience. This prescriptive skill has two parts: (1) Image assessment (assessing what image patterns speakers may possess and what images they wish to project) and (2) Audience disposition (assessing what receptivity patterns may be salient to the audience's perception of the dilemma).

2.3 SKILLS ARISING FROM COMPOSITION

Elocutio, is the division of rhetoric governed by the principle of kairos (using language in composition so that speaker and audience find closure (Kennedy, 1963). Such language is characterized by correctness, clarity, ornament, and propriety. Here, the literature lacks depth for the speech teacher. Educators complain that students lack writing skills, do not know the limits of language, and lack the flexibility to write from a variety of perspectives (Baile, 1979; Ingalls, 1983; Deethardt, 1982). In the work place, however, composition and writing skills are the most frequently prized "communication skills" named by employers (Blankenship, 1981). The student in the basic course should be introduced to differences between written and oral style and should gain competence in creating messages consistent with oral style. We label oral composition skills, "imaging" skills (Weaver, et al., 1984; Weaver, et al., 1985).
The main goal in composition is to cast words in such a format as to achieve closure with the audience. In written style, closure is achieved by detailed organization of the idea. The structure and organization of the argument can be elaborated and readers may check and recheck their understanding of that meaning by rereading the passage.

Oral style, by contrast, achieves closure by the rapid transmission of the idea, by incorporating emotion with the denotative meaning of the message, and by using figures or images to model abstract thoughts. Emotion helps to reduce ambiguity of understanding for the audience. The genius of oral style is that it uses an image to transmit the abstract idea. This image acts as a metaphoric code to unlock universals of stored meaning in the minds of the audience members. By the use of image, the speaker implies, "My idea is like when you experience A, B, or Y." Thus the image acts as a communication convention of cooperation between speaker and audience. The image also acts as a model by which the listeners see the abstract ideas of the speaker animated in their own consciousness. In order for an idea to gain credibility, it must have the illusion of movement in the audience's mind, and the speaker must somehow animate that idea. The image provides a useful tool for creating the illusion of movement for the audience without the benefit of film, canvas, or printed page. Oral discourse devoid of image only mimics the printed word, and bores the audience (Lacy, 1983).
2.4 SKILLS ARISING FROM MEMORY AND DELIVERY

Memoria, and pronunciatio are those skills which help the audience and speaker to remember content and control gesture or voice in the presentation. With one exception, these skills appear to be of little importance in the educational literature.

In summary, there is strong emphasis in the literature on critical thinking skills which will help students expand perspectives, draw themes together, draw conclusions, present organized data consistent with audience expectations, and write in oral style. We label these as: framing, scenario, prescription, and imaging skills.

3. TEACHING CRITICAL THINKING SKILLS

The exercises described below are designed to assist the student in gaining investigatory skills for the purpose of creating speeches. These teaching strategies are designed to be independent units which instructors may include as they choose in their normal course syllabus.

Students will need several items in order to complete these exercises. First, students must understand the course goals at the start of instruction. The instructor may explain the need for critical thinking skills in academic life and in the employment. A useful speech to illustrate the power of the humanities in professional life is the concise speech by Roger B. Smith (1984), Chairman of the Board of General Motors, as he addressed the Conference on the Humanities and Careers in Business, at Northwestern University.
Another source which argues for a liberal arts perspective in education arises from the computer market. Stewart Alsop, editor of Info World, a widely circulated computer magazine, foresees a decrease in the need for computer "experts." He argues that students should balance computer literacy with liberal arts courses to enhance their employment opportunities (The Road to Utopia, 1984).

Second, students need to be apprised of the acceptable quality level of the speeches. Only speeches which are of social significance will be accepted. We suggest that speeches be ones which attempt to unite the advances of science in society: "How physicians can justify medical costs;" "The Impact And/Or Implications of Robotics In Industry;" "Ethical Safeguards of Massive Data Storage Banks."

Third, the students will need an introduction to a data management system (DMS) to enhance the quality and quantity of research for speeches. DMSs are usually available on most university mainframe computers. Students may do a better job of gathering research for speeches if they are introduced to modern techniques of DMS. Freshmen may be overwhelmed by the sheer volume of library resources available to them, are often discouraged by the drudgery of writing out note cards by hand, will often take incomplete notes on scraps of paper which can be misplaced, and frequently miss the essential step of supplying a slug line on the note card to facilitate retrieval from the evidence file. A DMS enables students to abstract information as they are reading, to draft and redraft that information until they are satisfied with the level of condensation, to give the abstract numerous slug lines which facilitate retrieval using many search strategies.
and enable the student to view both the speech outline and the data
mass simultaneously. We argue that a DMS performs a vital liberal
arts function in that the student does not view each data abstract as
a discrete bit of information. By supplying many slug lines to the
abstract, the student quickly begins to determine which data bit is a
subset of a larger category, which is a superior category, and which
is a component of a larger topical dimension. Thus the student not
only gathers evidence but also supplies a weight to each piece. Tra-
ditional speech courses usually include a unit on library use and re-
search methods. This unit could be enhanced with an introduction to a
DMS. The Use of SCRIPT as a DMS language would take only a few hours
to master (UW SCRIPT, 1981). Two invaluable texts for introducing
DMS's would be: Susan Hockey (1984), A Guide to Computer Applications
in the Humanities and Bryan Pfaffengerger (1984) The College Student's
Personal Computer Handbook.

Fourth, students will need access to an anthology of current
speeches. A bulk subscription to Vital Speeches can be arranged by
contacting the publisher at City News Publishing Company, Southold,
New York.

3.1 FRAMING SKILLS

These exercises are designed to give students practice in the anal-
ysis of how a perspective limits the choices of a speaker, and how new
perspectives can expand information bases for speeches. The technique
of framing data to learn perspective can be introduced and illustrated
by a series of 35 mm slides. The instructor can photograph a familiar
The photographs can be close ups, photographs picking out several themes of the statue, views showing how the sculpture changes when an attractive person is placed in the foreground, or an aerial shot showing how the statue fits into the campus landscape. The slides are arranged by perspective then shown in class. This illustration enables students naive about the topic of perspectives to see how cognition is simply a framing process which gives the perceiver different views of the same object.

The instructor then distributes a transcript of John Kerry's 1971 speech, "Vietnam Veterans Against War" delivered before the Senate Foreign Relations Committee (Linkugel, et al., 1978). After an explanation of the speaker, the historical setting of the speech, and the purpose, the instructor may explicate portions of the speech which were clear strategies to limit or expand the information the speaker was giving to the audience (Freedman, 1984). Students are asked to speculate what information audience members would need if they were parents of a war casualty? Members of the VFW? Members of a peace group? The President? Parents of an expatriated college youth? The core concept of this exercise is to sensitize students to the fact that a "frame" of a speech can be conceptualized by asking what various members of the audience need to know about the topic.

Next, students would be asked to read an assignment from Vital Speeches and be prepared to discuss the speech from a variety of perspectives. In preparation, students would abstract the speech and write observations in their computer account using the following
guidelines: "How would you, as this speaker's speech writer, create a new perspective for this speaker, if there were 200 opponents seated in the audience; if the next speaker on the program were a political opponent; If the next speaker were a Cardinal? A national labor leader? A television news anchorperson? A congresswoman? Students should bring their printouts to class and compare their different perspectives of the same topic.

The instructor would select one audience member from the list — perhaps "labor leader" to complete the exercise. The different types of information for that audience member would be written on the board. After the views have been jotted on the board, the perspectives are given consecutive numbers. Three large concentric circles are drawn on the board and the class decides whether a particular view is a micro, intermediate, or macro frame of perspective. The breadth of information needed for each circle is discussed once all the topics have been placed within appropriate circles. Students are asked how their perception of the speaker has changed as a result of the group interaction and discussion in class (Brummett, 1984).

This exercise could be continued using a class member preparing his/her assigned speech. The student's topic is announced and classmates are asked to recall any images they have that may be associated with the topic. The "concentric rings" exercise above is repeated. The memory elaboration would enable the students to see that the memory roots of the audience may be an asset to a speaker expanding the scope of a topic or a liability when audience bias is articulated (Gemeke, 1984).
Theoretical frame techniques may now be introduced to the students after they have obtained some practice in changing perspectives. The instructor may introduce the classic framing techniques: What group is concerned about the topic? What is the speaker's relation to the group? What are the causes and effects of the problem? What is the history of the movement toward solution? What issues are a block to the group and the discovery of a solution? What does the speaker know about the problem? What resources does the audience have to solve the problem? What resources does the speaker have (Mackin, 1969, p. 19).

Students in a public speaking class could be assigned to cover (as a journalist) a local campus event. They would then be asked to present a speech on the event -- much as a journalist would prepare a story. The assignment could ask them to, first, frame the event. Second, they would have to identify the central issues that caused the event to occur. The third part of the assignment would have them offer a scenario of the event. Through this assignment they would be required to bind disparate information into an accessible, comprehensible whole.

Another technique for evaluation of information is the use of Pike's Tagmemics as articulated by Kneupper and Anderson (1980). Kneupper has developed innovative classroom techniques for teaching this elegant framing skill. His system is a $2 \times 2 \times 3$ format for identifying the complexity of a problem from the factors of statute/process; comparison/contrast; and unit/system of unit/unit in system.

Katula and Martin (1984) have also tested an innovative combination of inventio and dispositio skills which are used by the student in
asking frame questions about a topic. These questions include: Is the
problem a static, progressive, repetitive feature of the topic? What
happened? How did it work? What are the parts? How are they relat-
ed? What physical features are present? What are illustrations of
the topic? The Burkeian pentad has also been used as a form of analy-
sis for identifying the components of the operative motive in the top-
ic (Nelson, 1983).

Outside of class when students write abstracts of research docu-
ments on their computer accounts they should be encouraged to enter
this information in such a way as to practice framing skills and in a
way that facilitates information retrieval. An electronic abstract
should include key terms by which the abstract may be retrieved from
the account, frame terms, bibliographic entry, and abstract. If the
student were abstracting a speech by the President on the economy, the
entry might look like this:
By entering not only the abstract, but key terms which define the abstract, and the frame terms, the student has already begun the task of compressing and expanding the information for use in future documentation. It is compressed by the use of key search terms; it is expanded when the student thinks of audiences who may use the information.

3.2 SCENARIO SKILLS

In this section, students would be introduced to linguistic schemata. Language has the faculty of managing amounts of information by a variety of "programs" (schemata) very much like computer programs which manage the data mass. These schemata help to fit information into a gestalt (Gemake, 1984). This gestalt is nothing more than a
series of hypotheses or algorithms: if this, then that. The experi-
ence base of the class would provide the best illustration for this
critical thinking skill: the dating behavior of the college student.
Tell students that they are to write "The Complete Guide For Freshman
Dating Tactics At The University," during the next class session. Ask
the class to bring pictures, illustrations, photographs which have to
do with meeting people, members of the opposite sex, or affiliate re-
relationships. On the day of the class, explain the concept of schemata.
Here, the schemata are a series of norms that they know should be
complied with if dating is to be enjoyable. Break the class into
small groups and divide the pictures among each group. Each group is
told to compose a scenario of how to go about dating at the school us-
ing the pictures as reference visual aids. After ten minutes have
each group report their scenario. After each group has reported, the
instructor should jot down the schemata or norms the group members
used to include the information in their scenario. From the scenar-
ios, the instructor can identify the pattern of organization or argu-
ment used according to the classic forms: Time, space, topical,
cause-effect, problem-solution, criteria matching, implicative, or di-
dactic patterns (White, 1982, p. 113 ff). The class enjoys this exer-
cise even more if the instructor can recast a cause-effect pattern to
a criteria matching pattern; a didactic to an implicative pattern.

The instructor may continue the exercise by distributing copies of
a powerful speech such as Henrky Skolimowski’s (1984) "Freedom, Res-
sponsibility and the Information Society: The Time of Philosopher-
Kings Is Coming." The class is asked: What schemata or norms are evi-
dent in this speech? What patterns did the author use to argue his case? How did these patterns fit the thesis? What was the "story" -- scenario -- of his argument? The concept of the hypothesis has been introduced to the class with little effort using these two exercises.

The instructor can continue the hypothesis exercise by another format. Prior to class, ask a student who has collected a number of data abstracts centering on one theme to run a printout of this data file, and bring the printout to class. The student then reads the data to the class, one item at a time. The class members are asked to remain silent for a 10 second period after hearing each piece of data. After the silence, students are to jot down as many hypotheses suggested from the data as they can. The next abstract is read, and the process is repeated. At the conclusion of the reading, the hypotheses are read by the class. Commonalities and themes should be written on the board by the instructor (Dedmon, 1983; Pisapia, 1982; Wilson, 1981; Gambrell, 1980).

Another exercise which may enhance scenario skills is to have the students scan text book chapters and rapidly draw parts, sub parts and outlines, from the format of the text. The instructor can pick chapters appearing later in the class text for this exercise or distribute xerox copies of a short chapter in the class. If students can scan a whole chapter and create an abstract of the chapter, they not only grasp the thesis of the chapter, but can see how the author is arguing or arranging the text (Thomas and Robinson, 1972).

Still another exercise would be to have students write abstracts of the speeches they hear in class. Or instructors may stop their lec-
tures and ask the class to write an abstract of what has just been said in the lecture. By the use of a "flow chart" of ideas or concepts that is often used in debate, the students can see how ideas are connected and can see the logical line of the speaker's argument (Palmer, 1983).

Finally students would be given the opportunity to gain scenario skills by listening to speeches. The instructor may have a former student address the class. The class will be required to put away pencils and paper for this exercise. Prior to the speech, the class generates hypotheses about how the speaker will attack the topic. These observations will be placed on the board. The students are then alerted to memorize three main points of the address, two details of each point, three conclusions that could be drawn from the speech, three interesting details of the presentation, some concrete observations about the style of the speaker, some data about vocabulary used, and some assumptions that the speaker made about the audience's ability to grasp the information (Boodt, 1984). At the conclusion of the speech, give the students several minutes to jot down the points they can recall from speech before they discuss it. Listening skill is enhanced by first detecting "how the story of the argument" was told.

3.3 PRESCRIPTION SKILLS: SELF-ANALYSIS

Prescription skills have two parts. Skills of self-assessment and skills of audience analysis. Skills of self-assessment are easy to test and use in class. One of the easiest is the Fiedler LPC Scale which measures a person's task or affiliation orientation (1974). The
Sergiovanni Task Scale is another simple test of task or affiliate orientation (1960). The Halpin-Winer Scale is a test of interpersonal orientation which measures how others perceive the speaker (1957). If these attitude scales are administered to the class, scores can be compiled by the instructor and distributed in a compassionate manner so that the students can gain some empirical evaluation of how classmates view them. After taking the tests and receiving the scores, the instructor can discuss which strategies are most beneficial for the speaker, what strategies and patterns should he use if he wants to adjust that pattern in the mind of the audience? On the basis of what the speaker knows, what options are available to him to adjust that image before the start of the speech. The instructor should draw a State of the Union Address from Vital Speeches and ask the same questions of the class about how the President could change his image for a variety of television audiences.

Another technique for adjusting the image of the speaker is to adjust the content of the speech using conventions or norms of ethics. A classic set of these questions is found in Wallace (1955) and Rogge (1959).

3.4 PRESCRIPTION SKILLS: AUDIENCE ANALYSIS

The students may now be introduced to audience predispositions. White (1982) has the most lucid exposition of friendly, neutral, and hostile audiences expectations. His explanation of audience predispositions centers on a series of questions. Friendly Audience: Does the audience view this topic as a challenge to its belief system?
Does the audience want rich emotional proofs used by the speaker to convey trust to them? **Neutral Audience:** Does the audience want more information on the topic? Does the audience want the speaker to sort out conflicting views the audience may hold on the topic? **Hostile Audience:** Does the speaker start from the audience's perspective first? Does the speaker attribute credibility and rationality to the audience's perspective? Does the speaker offer an alternative to the impasse which confronts the speaker and audience? Has the new information been introduced by means of a familiar topic (Hansen, 1981; Hansen and Hubbard, 1984; Gaskins, 1981)?

**Experience is the best teacher in audience and image analysis.** Two types of addresses which would help students gain experience in audience assessment follow. The Lincoln-Douglas format may be used in competing sections of the same course. Students of one section would prepare the affirmative case; students from another section, the negative. Have the Halpin-Winer scale administered by the audience assessing the speakers. Of course the class will want to create a variety of strategies consistent with the types of audiences they may encounter (Edmonds, 1984).

Another format which would be useful in the classroom would be the team speech technique. A team is chosen from the class. This team prepares a speech which would be presented to another class section. The team would help the speaker (one of their number) to identify the materials that would be needed, and would help to design the speech. The team then would visit the opposing class and watch the speech as it was presented. The opposing class would discuss the speech and its merits or weaknesses.
3.5 Imaging Skills

In order to present organized ideas, the speaker needs to know how the right half of the brain organizes messages. As the left half of the brain is receiving information, the right half is generating images which help both the receiver and the sender to generate clearer messages. The right brain acts as the sound track on motion picture film. The sound track is a "picture" (image) of sound waves running down the side of the film. This picture activates an exciter lamp in the projector which translates the illusion of movement on the moving track into patterns of sound. Images in oral discourse excite psychological conventions or patterns in the right brain. Since the right brain reacts quicker than the left to stimuli, meaning is assimilated rapidly (Gemake, 1984). An exercise which may help students see the difference between written and oral style might be used in comparing two short works: R. Rosenblatt's (1982) essay "The Man in the Water" and Frank H. T. Rhodes,' (1984) "The Role of the Liberal Arts in a Decade of Increased Technology." The students can be assigned both speeches, and shown how to analyze them using the split screen technique on their computer account. One half of the screen is labeled WRITTEN STYLE, the other half is labeled ORAL STYLE. The students read through the speeches and label sentence fragments from each speech using the following categories as negative or positive examples: personal and direct language; verb placed at the start of the sentence to facilitate understanding; low or high use of polysyllables; use of jargon; of double meanings; of generalization; emotion; metaphor or simile; personification; transitional repertoire; and
variety of sentence length. Short code terms can be applied to each label to ease the sorting process. Students would find a line in the speech they identified as "use of generalization." They would fix the code term at the start of the citation then enter the quote from the text. When the students have completed their categorizations, they simply group all categories together using the sorting power of their computers. As a result, one half of the screen will contain codes and examples of what the student has identified as "written style" and the other half will contain codes and citations of "oral style." The visible quantitative difference between the two styles may convince numerically oriented students of this stylistic differentiation.

Another exercise which may aid students in building a "oral style" vocabulary may be used by asking students to compile phrases and sentences on their computer accounts that catch their attention in literature, or in the media. Ask students to categorize each of these phrases on their computer accounts under code terms: "VOTING RIGHTS," "TV AS WASTELAND," "MEDICAL MALPRACTICE," etc. When writing a speech, students may call up bits of evidence in the forms of vocabulary fragments for use in their speeches. Ask students to bring these vocabulary lists to class for discussion and comparison. The students may be guided in this discussion by asking: "Where would this quote be appropriate?" "What audience would be most likely to accept this type of vocabulary?" "What phrases would I feel most comfortable in using?"
4. TESTING THE CRITICAL THINKING SKILLS

The value of critical thinking can be tested in a variety of ways. The Kneupper-Lee assessment gives the instructor a solid picture of how the students benefitted from the course (Kneupper and Lee, 1984). This test focuses on hypothesis formation, analysis of research topics, and outlining topics. Another standardized test which appears to measure critical thinking is the Watson-Glaser Critical thinking appraisal (Herber, 1970). This test was developed using high school seniors who drew inferences from newspaper articles. The last test may be of greater value for the instructor because of the personality tests used in conjunction with the test. The use of the Test for Thematic Analysis, Self-definition, and Maturity of Adaptation, was designed specifically for the college audience (Winter et al., 1978).

5. SUMMARY

Traditional oratory centers on essential critical thinking skills highly relevant to the graduate. Armed with the baccalaureate, students leave the university to confront the bewildering "information age." The public speaking course, by utilizing the spirit of these traditional skills, can make a valuable contribution to students' education by providing them with a paradigm of idea management. Framing skills reduce information to manageable units. Scenario skills, weave disparate information parts into a comprehensive whole. Prescription skills meld argument with the receptivity levels of the audience members. By the use of imaging skills, the transmission speed of the idea may be adjusted. The future may well belong to graduates who can
manage the ideas implicit in an age of the "information explosion."
Their participation in the basic speech course may be their introduction to successful social leadership.

The halves of the curriculum were designed to provide the student with analysis and synthesis skills. The sciences as arts, focused on arranging bodies of knowledge into logical units, defining terms numerically, discovering relationships among objects, showing this relationship in quantitative terms, and discovering the known from the unknown. The languages as arts, gave students the opportunity
to discuss how the products of science were to be incorporated into society, to make ordered and clarifying remarks about the products of science for the public good, and an opportunity for stating the significance of the discoveries of science in an orderly fashion. For a detailed discussion of the goals of these halves of the curriculum and the associated religious biases which affected the shape of these courses, see: Joseph M. Miller, Michael H. Prosser, and Thomas W. Benson. *Readings in Medieval Rhetoric* (Bloomington, IN: Indiana University Press), 1973, and John H. Mackin, *Classical Rhetoric for Modern Discourse* (New York: The Free Press), 1969.

3 Apparently the student was ready to study rhetoric only after he had mastered the arts of grammar and logic. Rhetoric was perceived as the course which equipped the student for citizenship duties. The social and governmental implications of this are are fully discussed in John H. Mackin, *Classical Rhetoric for Modern Discourse* (New York: The Free Press, 1969), p. 16 ff.

4 We use the term scenario here as it is used in professional film writing. The scenario is the short document written after the director has decided what scenes will be photographed for the film. As a document the scenario ties all the scenes of the film together. It is an invaluable tool for actors and production personnel who must make some sense of the fragmentary shooting schedule. If the scenario does not make sense, the director is assured that the audience will not be able to comprehend the film either.


6 Many of the teaching techniques used here were adapted from those
appearing in the literature of elementary education. We found this literature to be rich with specific teaching techniques for instructing students in inference formation. When a specific exercise was mentioned in this literature, the authors adapted the theory of the exercise to an exercise in the college classroom. Educators have long known that pedagogy techniques do not defer to age. The success these exercises enjoy in the college classroom substantiates this axiom.

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