THE INFLUENCE OF READING ABILITY AND SPECIFICITY OF OBJECTIVES ON INTENTIONAL AND INCIDENTAL LEARNING FROM ESSAYS IN COLLEGE ENGLISH

Dissertation for the Degree of Ph. D.
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DENNIS REID THOMPSON
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THE INFLUENCE OF READING ABILITY AND SPECIFICITY OF OVJECTIVES ON ENTENTIONAL AND INCIDENTAL LEARNING FROM ESSAYS IN COLLEGE ENGLISH

presented by

Dennis Reid Thompson

has been accepted towards fulfillment of the requirements for

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James H. Nelson
Major professor

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ABSTRACT

THE INFLUENCE OF READING ABILITY AND SPECIFICITY OF OBJECTIVES ON INTENTIONAL AND INCIDENTAL LEARNING FROM ESSAYS IN COLLEGE ENGLISH

By

Dennis Reid Thompson

Purpose of the Study

A decline in the language ability of high school graduates and the democratization of higher education have created large numbers of college students unable to read college level texts. This study looked at one effort to help such students understand difficult prose material. Its purpose was to investigate the effects of reading ability and specificity of objectives on intentional and incidental learning from two essays in college English classes.

Procedures

Nine freshman English classes consisting of 226 students at Macomb County Community College (Michigan) were blocked by a standardized reading test into high, medium, and low reading groups. Each of these groups was divided into four treatment groups based on the specificity of verbs and objects in the objectives they received prior to reading an essay. The four groups were as follows: (1) vague verbs - vague objectives, (2) vague verbs - specific objects,

(3) specific verbs - vague objects, and (4) specific verbs - specific objects.

After reading the first essay, which dealt with women's liberation, students were given a multiple choice, true-false test which included both intentional and incidental items. One week later a retention test was given and the study was replicated with the second essay, a selection from Walden.

Major Findings of the Study

A multivariate analysis of variance showed the following results:

1. Reading ability had a significantly positive effect ($p < .05$) on intentional and incidental learning from both essays.

2. Specificity of verbs had no effect on either type of learning from either essay.

3. Specificity of objects had a strong, positive effect ($p < .005$) on immediate, intentional learning and a lesser but still positive effect on retention of intentional learning ($p < .071$). However, these effects just pertained to the second essay.

4. Immediate incidental learning was unaffected by specificity of verbs or specificity of objects.

5. There was a significant interaction between reading ability and specificity of objects for incidental learning on a repeated measures analysis of the second essay. Students

with low reading ability who received specific objects were aided on the retention test, whereas students with medium and high reading ability were slightly hindered by specific objects.

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By

Dennis Reid Thompson

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CHAPTER I

THE PROBLEM

This chapter contains a general introduction to the study and includes need, significance of the problem, purpose of the study, and an overview of the dissertation.

Need

The need for this study begins with two significant changes in American education in the past fifteen years: (1) a general decline in the academic abilities of high school graduates and (2) the democratization of higher education. The first has been the subject of numerous recent articles in the popular media, such as "Reading Deficiencies 'Nationwide Problem'" (Polker, 1975), and the following facts provide evidence of the decline. One is the sharp drop in scores on the Scholastic Aptitute Test (SAT), a reliable indicator of how well students will do in college. The mean score of this test has fallen from 500 to 430 in the last few years (Rodin, 1975). Another indicator of the decline in academic ability is the fact that one third of all high school graduates cannot read at the sixth grade level (Roueche, 1975). In addition, the recently completed National Assessment tests show a

reduction in language abilities of high school students (Beshoar, 1976).

The second change in American education which relates to this study is the democratic movement in higher education, a process which has allowed many "non-traditional" students (Cross, 1968) to enter college who would previously have been denied admittance because they were "not college material" (i.e., they had low high school GPA's and low standardized test scores). Public two year colleges have been leaders in this movement with their "open door" policy, which as John Roueche states, "implies acceptance of the concept of universal higher education" (1968, p. vii). Many senior institutions have joined the movement as political pressure from minority groups and economic pressure from declining enrollments (McCann, 1974) caused them to lower their admissions standards.

Although this movement has its good points, such as giving new career opportunities to many people, it, together with the decline in student ability, has created a serious problem: many students lack the basic stills necessary to succeed in college. Of particular importance to this study are language skills, and there is considerable evidence to show that too many beginning college students are inadequately prepared in this area. Remedial reading is now the second most offered course on college campuses today (Roueche, 1975), and both two year and senior institutions are faced with large numbers of students in need of extra

help.

The problem is particularly severe at two year institutions, where many educationally disadvantaged students enroll. Medsker and Tillery estimate that 30 to 50 percent of students in these colleges are in need of basic skills required for study when they enter (1971, p. 65). Particularly shocking was a study which found that almost 70 percent of the freshmen entering California's public junior colleges in 1965 failed the qualifying exam for regular English (Roueche, 1968, p. 13)!

Many senior institutions are also having difficulty. For example, 16 percent of CUNY's 1970 freshmen were deficient in English skills (Lederman, 1973), as were 15 percent of MSU's 1973 class (Juola, 1974). Incredibly, over 45 percent of the students at the University of California are taking remedial English ("College Texts," 1974)! Jack Shingleton, MSU's placement bureau director, sums up the situation for senior institutions rather bluntly: "We're not educating the elite any more. We're educating the masses" (in McCann, p. 10).

In light of the above figures, it is understandable why textbook publishers are reporting a big demand for simpler college texts ("College Tests," 1975). Paul Panes, chairman of the department of basic educational skills at Queensborough Community College, notes that "it is not uncommon for a significant percentage of entering City University (CUNY) students to be reading on a junior high

level, while traditionally most college textbooks are prepared on a readability level of upper senior high school level (in "College Texts," 1974). Publishers are trying hard to meet this demand, as evidenced by the fact that books currently marketed for freshman courses have an eighth grade readability level (Rodin, 1975). Thus, one solution to the problem of poor readers is to provide them with easier reading material.

An alternative solution to the problem of poor readers is to provide extra help for them. Such help can come from reading skills courses, tutors, and various methods used by content teachers to aid students in understanding what they read. It is the last approach with which this study is concerned.

Significance of the Problem

In this age of television and other electronic media, one sometimes hears people say, "Reading is no longer important, so don't worry if students can't read well." Such an attitude, however, limits the education of future generations to the electronic media and simplified textbooks and eliminates whatever benefits might be gained from reading what serious writers have said. If we take a different approach and seek ways to help students understand difficult prose material, a large number of non-traditional students will be helped. Moreover, teachers will

be able to expose students to important writing rather than turning to publishers for simplified texts or relying primarily on electronic media to convey information and concepts. This study also has importance because of the gaps it attempts to fill in current research on learning from prose material (see p. 18).

Purpose of the Study

The purpose of this study is to investigate the influence of (1) Macomb County Community College freshmen's reading abilities and (2) the specificity of objectives given to them before reading assignments on their intentional and incidental learning from those assignments. Intentional learning is the learning of material under the direction of definite instructions, whereas incidental learning is the learning of material in the absence of instructions directing that it is to be learned (Kessler and Loyd, 1970). The study involves 182 freshman English students at the Center Campus of Macomb County Community College using two essays by professional writers.

Overview

Chapter II reviews the theories and literature related to this study. Chapter III contains descriptions of the population, sample, essays, variables, research design, procedures used in analyzing the data, and methodology. It

also presents the hypotheses to be tested. Chapter IV contains the analysis of data as it relates to the hypotheses. Chapter V includes a summary, discussion of the results, and recommendations for further study.

CHAPTER II

A REVIEW OF RELEVANT THEORIES AND LITERATURE

At the most general level this study is based on Bloom's theory that "most students [perhaps over 90 percent] can master what we have to teach them, and it is the task of instruction to find the means which will enable our students to master the subject under consideration" (1968). If this view is correct, individual teachers should be eager to experiment with various methods of instruction to determine which ones work best with which students. Admittedly, Bloom restricts his theory to "closed" subject matter, but the minimum learning students should gain from reading an essay can be considered in this category.

At a more specific level, this study is based on theory and research in two areas: (1) behavioral objectives as aids to learning, which is subdivided into all types of learning and learning from prose material, and (2) learner aptitude by treatment interactions with regard to learning from prose materials. The first area has received more publicity and research than the second, but little of it relates to reading college level essays. All studies cited in this chapter involve students in or above the seventh grade and learning demonstrated on posttests as the dependent variable. Following discussions of these two areas

will be an analysis of gaps in the research which this study helps fill.

Behavioral Objectives as Aids to Learning

All types of learning

Theory regarding the use of specific learning objectives has been an important subject in education for many years (e.g., Tyler, 1951; Bloom, 1956), with its main popularity and application attributable to Mager's Preparing Instructional Objectives in 1962. Early writing centered on the importance of teachers defining their objectives, whereas more recent writing has emphasized that making students aware of the objectives can act as an aid to learning. (Mager, 1962; Cohen, 1969; Gagne, 1970; Kibler, Barker and Miles, 1970; and Roueche and Pitman, 1973). Simply stated, basic theory on behavioral objectives says that students receiving such stimuli should learn more than students wo do not receive them.

This view is sometimes accepted as fact, but it has by no means been proven true. For example, in Duchastel and Merrill's review of the effects of behavioral objectives on learning (1973), ten studies found no significant differences between groups receiving objectives and those who did not (Smith, 1967; Bishop, 1969; Blaney and McKie, 1969; Boardman, 1970; Brown, 1970; Oswald and Fletcher, 1970; Stedman, 1970; Weinberg, 1970; Jenkins and Deno, 1971; and Olson, 1971); five studies showed a significant positive

advantage for behavioral objectives (Doty, 1968; Engel, 1968; Tieman, 1968; Dalis, 1970; and Lawrence, 1970; and one showed a negative influence of objectives (Yelon and Schmidt, 1971). Duchastel and Merrill's conclusion is that "no simple answer can be provided" to the key question: "Does communicating behavioral objectives to students have a facilitative effect on their learning?" (p. 54). In contrast, Rothkopf offers a more optimistic conclusion of their review, noting that "objectives sometimes help and are almost never harmful." (in Duchastel and Merrill, 1973; p. 63).

Other recent studies not covered in Duchastel and Merrill's review are more positive. Sixteen show statistically significant results in favor of behavioral objectives (Cook, 1969;* Kessler and Loyd, 1970; Rothkopf and Kaplan, 1972; Booth, 1973; Glowatski, 1973; Huck and Long, 1973; Kaplan and Burgin, 1973; Kaplan and Rothkopf, 1973; Olsen, 1973; Sheldon and Miller, 1973; Snider, 1973; Sulzon, 1973; Taylor, 1973; Martin, 1974; Edwin Anderson, 1975; and Elaine Anderson, 1975). In contrast, only four show no significant differences (Cook, 1969;* Payne, 1972; Shields, 1972; and Coleman and Fowler, 1973), and only one reports a statistical difference in favor of the control group (Moody, 1975).

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* Cook's study showed no significant differences on an immediate posttest but a significant difference in favor of the group receiving objectives on a retention test.

Learning from prose material

One problem with trying to generalize about the effect of objectives on learning is the wide difference between the studies. In some the learning task is a game; in others a whole semester course is involved; while in still others a single lecture, movie, or reading assignment is the focus. This study deals with the last type, so a discussion of theory and research on the effect of behavioral objectives on learning from prose material will be presented next. It will be divided into three somewhat overlapping categories: the effect of objectives on intentional learning, the effect of objectives on incidental learning, and the effect of specificity of objectives on both types of learning.

1. Intentional Learning

With regard to learning from prose material, Rothkopf (1970) has coined the term "mathemagenic behaviors" to signify the covert and overt activities of a student that occur in an instructional situation and affect the learning consequences of that situation. He and others (e.g., Frase and Kaplan) group behavioral objectives, questions, advanced organizers and instructions in the category of stimulants for mathemagenic behavior directed toward learning from prose material. Reading specialists such as Strang, McCullough and Traxler (1967), while not specifically referring to behavioral objectives, agree with this theory in their comments on learning from reading assignments:

"alert attention is prerequisite to learning" (p. 213) and "Learning occurs when there is a need to know, a problem to be solved" (p. 214). In other words, objectives, questions and other learning stimuli can help alert the reader's attention by creating a "mind-set to read in a thoughtful, purposeful way" (p. 274). Others in agreement are Bader (1974) and Sanders (1974), who recommend that content teachers give students guides to improve their reading comprehension.

If we select from the research mentioned earlier only those studies involving the effect of objectives on intentional learning from prose material, the results strongly favor the use of objectives. Thirteen studies show statistically significant results in favor of subjects receiving objectives as compared with subjects not receiving objectives (Doty, 1968; Engel, 1968; Cook, 1969;* Dalis, 1970; Kessler and Loyd, 1970; Rothkopf and Kaplan, 1972; Booth, 1973; Kaplan and Burgin, 1974; Kaplin and Rothkopf, 1973; Sulzon, 1973; Kaplan, 1974; Edwin Anderson, 1975; and Elaine Anderson, 1975), whereas only five show no significant differences (Smith, 1967; Cook, 1969;* Oswald and Fletcher, 1970; Stedman, 1970; and Olson, 1971) and only one (Moody, 1975) shows a negative effect for objectives.

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*See note on p. 9

It is interesting to note that semi- or fully programmed texts were used in three of the five studies showing no significant differences (Smith, 1967; Cook, 1969;* and Stedman, 1970) but only in three of the thirteen studies showing significant results (Engel, 1968; Cook, 1969;* and Sulzan, 1973). Jenkins and Deno (1971) and Cook (1971) suggest that students may not need objectives for such clearly written, well organized, and self-instructional prose material as much as they may need them for more abstract material. Their recommendations are taken into account in this study, which involves fairly difficult essays rather than programmed texts as the reading material.

2. Incidental Learning

The second category of theory and research on behavioral objectives and reading concerns incidental learning, which was defined previously as the learning of material in the absence of instructions directing that it is to be learned (Kessler and Loyd, 1970). Some educators criticize the use of behavioral objectives as a learning aid, claiming that such objectives <u>decrease</u> incidental learning which may be very important in the long run. Atkin (1968), for example, warns that emphasizing certain objectives (for intentional learning) will cause other, unstated objectives to atrophy. Another who shares this view is MacDonald (1970).

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*See note on p. 9

In contrast, Rothkopf (1970) hypothesizes that specific objectives can increase incidental learning as well as intentional learning by inducing "positive mathemagenic effects." In other words, the objectives, by stimulating a better "mind set" for learning certain points, may also indirectly stimulate better reading in general and therefore more learning of other, incidental points as well.

Postman (1954) supports this hypothesis with his contention that the difference between intentional and incidental learning "refers to the degree to which the instruction stimulus prepares the S for the test of performance" (p. 146). Agreeing with McLaughlin (1965) on the similarity between intentional and incidental learning, he says the two are not a dichotomy but "extremes of a dimension," because "set to learn may vary continuously in degree as a function of the instruction stiumlus" (p. 146). He also cites research by Bromer (1942) and Mechanic (1962) showing that "the difference between incidental and intentional learners is smaller when meaningfulness is high than when it is low" (p. 191). However, Postman still thinks it is useful to distinguish between these types of learning in research (such as this study) which tests the effectiveness of instructional stimuli (p. 185).

Although research in this area "shows with almost complete if not with complete unanimity [that] Ss do not recall material as well under incidental [no objectives or instructions] as under intentional instructions" (Deese,

1964: p. 203), it also lends some support to Rothkopf's view that incidental learning can be improved by the presence of behavioral objectives, specific questions, or specific instructions for intentional learning.* Six studies show significant increases in incidental learning for subjects receiving such learning stimuli compared with those not receiving them (Bruning, 1968; Frase, 1967; Kaplan and Rothkopf, 1974; Rothkopf, 1966; Rothkopf and Bisbicos, 1967; and Rothkopf and Kaplan, 1972); one showed mixed results for different parts of the study--increases for some and no significant differences for others (Kaplan, 1974); two showed no significant differences (Kessler and Loyd, 1970; and Olson, 1971); and four showed a negative influence of stimuli on incidental learning (Frase, 1967, 1968a, 1968b; Rothkopf, 1966). In spite of these last four studies, Rothkopf and Kaplan conclude that "carefully specified objectives will not interfere with the serendipitous discovery of information not directly relevant to instruction" (1972, p. 92). Interestingly, the studies showing no significant differences can be considered as support for his view, since they show that specific learning stimuli do not <u>interfere</u> with incidental learning.

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*These three types of stimuli are grouped here because of their specificity and their applicability to the definition of incidental learning. All studies using any of these stimuli measure incidental learning as posttest questions <u>not</u> included in the learning stimuli. The control groups received either a general instruction to "read and understand the material" or just "read the material."

3. Specificity of Objectives

The third category of theory and research on specific instructions and reading is the specificity of the objectives. Standard behavioral objective guidelines such as Mager (1962) stress the need for specific language. This is true for both verbs (e.g., "write" or "list" vs. "know" or "understand") and objects (e.g., "the first three Presidents" vs. "the important material"). In other words, the more specific an objective is, the better it will be for helping students learn.

On the other hand, emphasizing specificity might have a deleterious effect on learning. For example, a long reading assignment might call for a long list of objectives, and the size of this list alone might interfere with learning by scaring, confusing, or irritating students. Another criticism of overly specific objectives comes from the relatively new domain-referenced testing movement, which attempts "to find a reasonable compromise between vagueness and over-precision" (Baker, 1974, p. 11). Baker criticizes those who overemphasize phrasing teaching objectives in "the much exalted formula: 'Given . . . the student will be able to . . .'" (p. 11). Continuing this criticism, Baker notes sarcastically that "as long as a 'behavioral' verb has been supplied, many consultants and supervisors have little to criticize" (p. 11).

Although domain-referenced testing applies more to course objectives rather than to objectives for reading an

essay, which this study involves, it relates to this study because two independent variables (See Chapter III, p. 20) are the specificity of verbs and objects. Is it really necessary to be extremely specific in writing objectives to aid in reading comprehension? This study seeks to answer that question.

Research on this issue has generally contrasted the effect of general vs. specific objectives as aids to learning. Unfortunately, as Duchastel and Merrill point out (1973, p. 54), the distinctions between types of objectives are often not clear. Some studies, for example, do not give examples of their objectives. For those studies which can be grouped together, results favor the more specific objectives. With regard to <u>intentional</u> learning, five show significant results in favor of specific objectives (Tiemann, 1968; Blaney and McKee, 1969; Dalis, 1970; Rothkopf and Kaplan, 1972; and Kaplan and Rothkopf, 1974) while two show no significant differences between groups receiving specific and general objectives (Jenkins and Deno, 1971; and Kaplan, 1974). Moreover, it is worth noting that while the verbs in Jenkins and Deno's study were very different (e.g., "learn" vs. "list"), the objects were not. For example, directing students "to learn what common pitfalls in social science research must be avoided" -- an example of a vague objective -- seems to provide a fairly clear task, certainly more clear than directing them to learn "the main points about social science research." Their specific objectives

were different mainly because they added Maeger style conditions and verbs, and they also included sample test items.

Very little research has been done involving specificity of objectives and incidental learning. The two studies that have been reported (Rothkopf and Kaplan, 1972; and Kaplan, 1974) showed that incidental learning was not affected by specificity of objectives.

Aptitude by Treatment Interactions

As mentioned previously, this area has received less research than the effect of behavioral objectives on learning. This is ironic in light of the fact that educators have long assumed that different types of students benefit from having instruction tailored to their needs. So many variables (e.g., student attitude and aptitude, media, type of class, type of learning, teacher personality, etc.) are involved, however, that it is difficult to generalize about what types of instruction work best for which students unless the generalization is very limited. One such generalization is that slower students benefit the most from specific instructions or objectives. Unfortunately, there are few studies closely related to this one which test this assumption. Duchastel and Merrill's review (1973) reports no studies involving behavioral objectives that blocked students on reading ability. The closest is a study which blocked students on vocabulary scores (Shavelson and

Berliner, 1974). Results suggested that students with high scores should read the text with no study questions and answers, whereas students with low scores should receive questions and answers after the text. However, giving students questions and correct answers may be a substitute for learning from the text itself. Students in this study may have been able to answer posttest questions (dependent variable) solely from studying the questions and answers after the text.

Several other studies involving behavioral objectives or specific questions blocked students on general cognitive ability tests (Berliner, 1971; Hollen, 1971; Merrill, 1970, 1971). In the first two, memory ability inversely correlated with questions -- i.e., slower students benefited the most from specific learning stimuli. In both of Merrill's studies, the presence of objectives and/or rules reduced the importance of reasoning ability in learning an imaginary science through computer assisted instruction.

Gaps in Reported Research

This study attempts to fill four gaps in the above research. For one, very little work has been done with intentional or incidental learning from prose essays. Most studies on learning from prose use very clearly written prose (e.g., Kaplan and Rothkopf use Bell training manuals) and several use programmed texts. Only one study (Kessler

and Loyd, 1970) used an abstract essay of the type frequently found in freshman English classes, and this one did not use specificity of objectives as a variable. Secondly, no studies testing the effectiveness of objectives as aids to learning from prose material have blocked students on reading ability, as this one will do. Third, no studies involving learning from prose material and specificity of objectives have controlled for both specificity of verbs and specificity of objects. In other words, if specific objectives really are better than general ones, what are the essential aspects of the objective which must be specific? This study investigates that question. Finally, many of the studies stated above using prose material are laboratory studies using paid volunteers as subjects. Even if they are in-class projects, they often use prose material irrelevant to the course. This study is a field study using students in freshman English classes and regular course material.

CHAPTER III

DESIGN

This chapter contains an overview, description of the population, sample, essays, variables, research design, procedures used in analyzing the data, and methodology, as well as the hypotheses tested in the experiment.

Overview

Students in nine freshman English classes at Macomb County Community College (MCCC) were blocked according to reading ability into high, medium, and low groups. Members of each group were then randomly assigned to one of four treatment groups according to the specificity of objectives used as instructions for reading an essay. After reading the essay, all students took a posttest containing intentional and incidental items. One week later a retention test was given. This procedure was then replicated with another essay, posttest, and retention test. A multivariate analysis of variance (MANOVA) was used to interpret the data, first looking at the immediate and retention tests separately and then as repeated measures. Data from each essay was handled separately.

Population

The Center Campus of Macomb County Community College is a comprehensive community college located twelve miles north of Detroit. Enrollment in the 1975 Fall Semester was 6208 head count and 4356 full time equated.* Most of these students come from nearby suburbs, although some are from farming areas and a few are from Detroit. Most specifically, the population to which this study will be generalized is white, suburban, middle class (family income approx. $9,000-20,000) community college freshmen (male or female) between the ages of 17 and 25, whose reading ability falls below the 85th percentile on the Diagnostic Reading Test (1967) or a similar, standardized reading test.

Sample

The sample for this study was 182 students in nine freshman English classes during the Fall, 1975 semester. Four classes were the experimenter's, four were taught by a second teacher, and one was taught by a third teacher. The teacher was not a planned or confounding variable because of the methodology used. Of these 182 students, 145 were present for both immediate and retention tests on one essay, and 120 were present for both tests on the other essay.

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*Full time equated = # credit hours/12

The Essays

The actual experiment consisted of two main parts. The first involved an essay by Gloria Steinem entitled "What It Would Be Like If Women Win" (1970; see Appendix A.), hereafter referred to as "Women's Lib." The second involved a selection from Walden by Henry David Thoreau (1966; see Appendix D.), hereafter referred to as "Walden." The latter is not a self-contained essay, but with the brief introduction added it can stand quite effectively as a separate piece and is called an essay in this paper for the sake of convenience.

Both essays are between 2000 and 2500 words in length and are typical of reading assignments in college freshman English classes: Women's Lib is representative of current issue readings and Walden is a good example of assignments in the classics. In terms of readability formulas the two are fairly similar, as seen in Table 3.1. However, Walden is probably more difficult than Women's Lib in ways unaccounted for in these readability formulas. In particular, Walden contains considerable figurative imagery while Women's Lib has little, and Walden, originally published in 1854, has several archaic words (e.g., "trumpery") in contrast with the modern style of Women's Lib. On the other hand, an important similarity is that both have many words which would be familiar to most good readers but unfamiliar to most poor readers (e.g., "machismo" and "reactionary"

in Steinem's essay and "abstain" and "malefactors" in Thoreau's).

TABLE 3.1

READABILITY OF ESSAYS
(expressed in grade levels)

Formula	Women's Lib	Walden
Dale-Chall (1948)*	11.3	11.1
SMOG (McClaughlin, 1964)	13.0	13.0

Variables

Independent Variables

Three independent variables were involved in this study: (1) reading ability, (2) specificity of verbs, and (3) specificity of objects. To block students on reading ability, all 226 students in the nine English classes were given Form D of the Diagnostic Reading Test, Survey Section: Upper Level (1967).** Although an explanation of the test

* The simplified form of the Dale-Chall formula developed by Charles R. Goltz (1962) was used to calculate these grade levels.

** The experimenter administered all tests, both to his classes and classes taught by the other instructors, who introduced him as a friend and fellow English teacher. In these classes the approach was one of togetherness: two instructors working together to see how well students read at MCCC. This was done both to relax the students and to make the experimenter's presence seem as natural as possible.

results was not a factor in the experiment, the experimenter explained them a few weeks later to satisfy student curiosity, to provide a reason for the test other than its use as a blocking variable (students were not told about this use until later), and to strengthen his relationship with classes taught by the other instructors.

The raw total scores from this test were ranged from highest to lowest and arbitrarily divided into high, medium and low reading ability groups of approximately equal size. The actual sizes and national percentile ranges are shown in Table 3.2.

TABLE 3.2

READING ABILITY GROUPS

Ability	Raw Score Range (Max. = 100)	Percentile Range (National Norms)	N**
High	73 - 95	41 - 98*	70
Medium	62 - 72	17 - 40	74
Low	28 - 61	1 - 16	82

Median = 66

* The percentile range is somewhat misleading for the High group, because only three students scored above the 85th percentile. In contrast, nine students in the Low group had extremely low scores (first or second percentile).

** In order to make the group sizes more equal, the dividing points would have separated students with identical scores.

The two other independent variables, specificity of verbs and objects, involved the instructions students were given prior to reading the essay. Each variable had two levels: vague and specific. The two vague verbs used were "understand" and "know," which contrast with a specific verb like "choose." In addition, objectives with specific verbs included Mager (1962) style conditions (e.g., "Given groups of four statements, choose the one from each group that best explains . . .").

An example of a vague object is "Thoreau's views," as in "Understand Thoreau's views" (vague verb - vague object). An example of a specific object is "Thoreau's attitudes toward owning furniture," as in "Given a statement, determine if it is true or false regarding Thoreau's attitude toward owning furniture" (specific verb - specific object). See Appendices B and E for copies of all objectives used.

To manipulate these last two variables, each of the three reading groups was divided by a simple, random procedure into four nearly equal subgroups.* The four sub-

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* The first number between one and four that appeared in a table of random numbers was used to determine a starting point from the top of the list of reading scores. The student at this point was assigned to group one, the next student to group two, the next student to group three, and so on down the list. The actual sizes generated by this process were Group One = 57, Group Two = 57, Group Three = 57, and Group Four = 55.

groups were (1) vague verbs - vague objects, (2) vague verbs - specific objects, (3) specific verbs - vague objects, and (4) specific verbs - specific objects.

Dependent Variables

The two main dependent variables, intentional and incidental learning, were measured by twenty-five question comprehension tests given immediately and one week after reading the essays. The tests used a combination of multiple choice and true-false items (See Appendices C and F) and contained fifteen intentional questions (questions that related to a specific object in an instructional objective) and ten incidental questions (questions not related to a specific object in an instructional objective).

Although the cognitive level of the test questions was not a variable, both tests contained items at the knowledge and comprehension levels, based on the Taxonomy of Educational Objectives (Bloom, 1956), and the Walden test also had some items at the Application level. This information is shown in Table 3.3.

TABLE 3.3

NUMBER OF TEST ITEMS AT DIFFERENT COGNITIVE LEVELS

Level	Number of Items	
	Women's Lib	Walden
Knowledge	22	13
Comprehension	3	10
Application	0	2

The reliability of these tests was determined in two ways. Using the Kuder-Richardson 21 formula the split half reliability is .585 for Women's Lib and .572 for Walden. Using the immediate and retention tests as a test-retest reliability measure, the correlations are .814 for Women's Lib and .694 for Walden.

A third dependent variable was the difference between scores on the immediate posttest and the retention test given one week later.

Research Design

These three independent and dependent variables combined to form the 2x2x3 design shown in Table 3.4.

TABLE 3.4

EXPERIMENTAL DESIGN

Independent Variables			Dependent Variables			
			Immediate		Retention	
Reading	Verb	Object	Intentional	Incidental	Intentional	Incidental
High	Vague	Vague				
		Specific				
	Specific	Vague				
		Specific				
Medium	Vague	Vague				
		Specific				
	Specific	Vague				
		Specific				
Low	Vague	Vague				
		Specific				
	Specific	Vague				
		Specific				

Procedures for Analyzing the Data

The data was analyzed by the Michigan State University Computer Center using Jeremy Finn's (1967) Multivariate Analysis of Variance program (MANOVA). The immediate and retention scores were treated separately on the first run and as a repeated measures analysis on the second. All probabilities from the F tests are rounded to three decimal places. Those falling below .10 are noted as guidelines for future research, but the .05 alpha level is the criterion for all hypothesis tests.

Methodology

The actual experiment started about the middle of the 1975 Fall Semester. In the students' regular classroom at the regularly scheduled times,* and again working cooperatively with the other teachers when with their classes, the experimenter gave a manila envelope bearing the student's name to each student. Each envelope contained one of the four sets of objectives (see Appendix B) and the Women's Lib essay. In addition to the written directions and objectives, students were told that the envelopes contained directions and an essay to read, that they would be tested

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* The nine classes covered all parts of the day, from 8:00 a.m. to 9:00 p.m., but time was not considered to be a confounding variable since each class contained students in each of the treatment groups. Temperature and lighting in all classrooms was normal at all times.

on the essay when they were through reading it, and that they would be discussing the essay at a later date. Possible Hawthorne effects were minimized by the fact that students were already familiar with the experimenter from his administering the Diagnostic Reading Test and discussing the results with them. In addition, it is common in many classes to hand out reading material on which students will later be tested and/or expected to discuss. The envelopes were admittedly an unusual factor but they were explained by saying they were needed because several other classes were being tested and we wanted to keep each student's work separate for later discussion. In short, every effort was made to make the experiment as natural as possible.

When each student finished reading the essay and reviewing the objectives, he put the essay and directions back in the envelope, brought the envelope to the desk, and picked up a test (hereafter referred to as the "Immediate" test). There were no time constraints, and all students finished within forty-five minutes.

One week later the students were given the same test again (hereafter referred to as the "Retention" test). Following this test, in the same class period, the experiment was replicated with the Walden essay. One week after that, the Walden retention test was given. Finally, at various times in the next few weeks the experimenter returned the scored tests and led discussion in each class about the articles, objectives, tests, and the variables

involved in the experiment. This discussion was not a factor in the experiment but was well received by the students. Until this time students did not know what group they were in or even that they had been assigned to different groups. Only a few students said they thought there were different sets of directions, but no one said he knew what directions other students were using.

Hypotheses

The first seven hypotheses below relate to the immediate and retention tests taken separately. All are stated in the null form, and following each hypothesis is the anticipated result (i.e., whether the null will be retained or rejected).

Hypothesis 1: There will be no significant difference in intentional or incidental learning on the immediate or retention tests between students of different reading abilities.

Expected result: the null will be rejected because better readers should be able to score higher on reading tests.

Hypothesis 2: There will be no significant difference in intentional or incidental learning on the immediate or retention tests between students receiving objectives with vague verbs and those receiving objectives with specific verbs.

Expected result: the null will be retained.

Hypothesis 3: There will be no significant difference in intentional or incidental learning on the immediate or retention tests between students receiving objectives with vague objects and those receiving objectives with specific objects.

Expected result: the null will be rejected. This prediction is based on the assumption that the object portion of an objective, rather than the verb portion, is the essential part for inducing "positive mathemagenic effect" (see pp. 10-11).

Hypothesis 4: There will be no significant reading X verb interaction effect for intentional or incidental learning on the immediate or retention tests.

Expected result: the null will be retained.

Hypothesis 5: There will be no significant reading X object interaction effect for intentional or incidental learning on the immediate or retention tests.

Expected result: the null will be rejected. This prediction is based on the assumption that students with low reading ability will benefit more from specific objectives than will students with high reading ability.

Hypothesis 6: There will be no significant verb X object interaction effect for intentional or incidental learning on the immediate or retention tests.

Expected result: the null will be retained.

Hypothesis 7: There will be no significant reading X verb X object interaction effect for intentional or incidental learning on the immediate or retention tests.

Expected result: the null will be retained.

The next seven hypotheses relate to the difference scores between the immediate and retention tests (i.e., immediate score - retention score = difference score). Like the first seven, these are also stated in the null form. The anticipated result for each is that the null will be retained because there is no reason to expect that relationships between group scores should change over time.

Hypothesis 8: There will be no significant difference in intentional or incidental learning between difference scores of students with different reading abilities.

Hypothesis 9: There will be no significant difference in intentional or incidental learning between difference scores of students receiving objectives with vague verbs and those receiving objectives with specific verbs.

Hypothesis 10: There will be no significant difference in intentional or incidental learning between difference scores of students receiving objectives with vague objects and those receiving objectives with specific objects.

Hypothesis 11: There will be no significant reading X verb interaction effect of difference scores for intentional or incidental learning.

Hypothesis 12: There will be no significant reading X object interaction effect of difference scores for intentional or incidental learning.

Hypothesis 13: There will be no significant verb X object interaction effect of difference scores for intentional or incidental learning.

Hypothesis 14: There will be no significant reading X verb X object interaction effect of difference scores for intentional or incidental learning.

CHAPTER IV

ANALYSIS OF RESULTS

This chapter analyzes the data as it applies to the fourteen hypotheses listed in Chapter III. The results for each essay are discussed separately, and Tables showing cell sizes, means, and standard deviations are presented only when they help illustrate F tests near or below the .05 level. However, tables showing all cell sizes, means, and standard deviations are presented in Appendices G and H.

Women's Lib Essay

Immediate and Retention Tests Uncombined

Hypothesis 1: There will be no significant difference in intentional or incidental learning on the immediate or retention tests between students of different reading abilities.

This hypothesis was rejected beyond the .05 level of significance for both intentional and incidental learning on both the immediate and retention tests, as can be seen in Tables 4.1 and 4.2. Note that these differences are significant for both the multivariate (Immediate Test, $p < .0001$; Retention Test, $p < .004$) and univariate F tests.

TABLE 4.1

RESULTS OF THE MANOVA* FOR
THE IMMEDIATE TEST ON THE WOMEN'S LIB ESSAY

Source	df	Variable	Univariate F	Univariate p	Multivariate F	Multivariate p
Reading	2	Intentional	11.10	.0001		
		Incidental	6.71	.002	7.02	.0001
Verb	1	Intentional	.58	.449		
		Incidental	.19	.665	.29	.748
Object	1	Intentional	.03	.860		
		Incidental	.46	.500	.24	.788
Reading X Verb	2	Intentional	.51	.601		
		Incidental	1.31	.273	.70	.592
Reading X Object	2	Intentional	.11	.894		
		Incidental	.80	.453	.524	.718
Verb X Object	1	Intentional	.52	.473		
		Incidental	.0007	.978	.31	.730
Reading X Verb X Object	2	Intentional	1.34	.265		
		Incidental	.07	.932	.71	.587

* MANOVA = Multivariate Analysis of Variance

TABLE 4.2

RESULTS OF THE MANOVA FOR
THE RETENTION TEST ON THE WOMEN'S LIB ESSAY

Source	df	Variable	Univariate F	Univariate p	Multivariate F	Multivariate p
Reading	2	Intentional	4.67	.011		
		Incidental	6.12	.003	4.01	.004
Verb	1	Intentional	.90	.344		
		Incidental	.44	.511	.52	.594
Object	1	Intentional	.02	.893		
		Incidental	.38	.537	.25	.781
Reading X Verb	2	Intentional	1.84	.163		
		Incidental	.77	.464	1.12	.350
Reading X Object	2	Intentional	.60	.548		
		Incidental	.64	.528	.80	.524
Verb X Object	1	Intentional	.41	.525		
		Incidental	.17	.679	.23	.796
Reading X Verb X Object	2	Intentional	.42	.660		
		Incidental	1.54	.218	.85	.495

As expected, students who did the best on the standardized reading test also did the best on the tests used in this study. This effect of reading ability is also apparent by contrasting the cell means in Tables 4.3, 4.4, 4.5, and 4.6. Even though there are several cases in which Medium readers scored better than High readers (e.g., Table 4.3, Vague Verb-Vague Object), and one highly unusual case where Low readers scored better than High readers (Table 4.5, Vague Verb-Specific Object), the general trend can be expressed as High > Medium > Low.

TABLE 4.3

CELL SIZES, MEANS, AND STANDARD DEVIATIONS SHOWING EFFECT OF READING ABILITY ON THE INTENTIONAL ITEMS OF THE WOMEN'S LIB IMMEDIATE TEST (Maximum Score = 15)

Reading	Vague Verb Vague Object			Vague Verb Specific Object			Specific Verb Vague Object			Specific Verb Specific Object		
Ability	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.
High	13	12.38	2.22	11	12.00	1.73	9	12.00	1.41	12	12.83	1.47
Medium	15	12.53	1.77	15	12.87	2.10	17	12.47	2.18	17	11.94	1.75
Low	15	10.80	2.24	12	11.25	1.54	13	11.15	2.34	16	10.31	2.52

Total N = 165

TABLE 4.4

CELL SIZES, MEANS, AND STANDARD DEVIATIONS SHOWING EFFECT OF READING ABILITY ON THE INCIDENTAL ITEMS OF THE WOMEN'S LIB IMMEDIATE TEST
(Maximum Score = 10)

Reading	Vague Verb Vague Object			Vague Verb Specific Object			Specific Verb Vague Object			Specific Verb Specific Object		
Ability	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.
High	13	7.77	1.54	11	7.45	1.21	9	8.22	.83	12	8.17	1.03
Medium	15	7.33	1.40	15	7.53	2.07	17	7.12	1.41	17	7.24	1.71
Low	15	7.13	1.45	12	6.67	1.67	13	6.92	1.66	16	6.25	2.02

Total N = 165

TABLE 4.5

CELL SIZES, MEANS, AND STANDARD DEVIATIONS SHOWING EFFECT OF READING ABILITY ON THE INTENTIONAL ITEMS OF THE WOMEN'S LIB RETENTION TEST (Maximum Score = 15)

Reading	Vague Verb Vague Object			Vague Verb Specific Object			Specific Verb Vague Object			Specific Verb Specific Object		
Ability	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.
High	11	11.45	1.54	11	11.27	1.21	7	12.00	.83	11	12.27	1.03
Medium	15	11.93	1.40	13	12.00	2.07	16	11.56	1.41	14	10.92	1.77
Low	11	10.27	1.46	10	11.50	1.67	10	10.20	1.66	16	10.25	2.02

Total N = 145

TABLE 4.6

CELL SIZES, MEANS, AND STANDARD DEVIATIONS SHOWING EFFECT OF READING ABILITY ON THE INCIDENTAL ITEMS OF THE WOMEN'S LIB RETENTION TEST (Maximum Score = 10)

Reading	Vague Verb Vague Object			Vague Verb Specific Object			Specific Verb Vague Object			Specific Verb Specific Object		
Ability	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.
High	11	7.73	1.56	11	7.00	1.61	7	7.71	.95	11	7.64	1.29
Medium	15	7.27	1.44	13	7.38	1.94	16	7.12	1.40	14	7.43	.94
Low	11	6.45	2.30	10	7.00	1.41	10	6.80	.79	16	5.81	1.83

Total N = 145

Hypothesis 2: There will be no significant difference in intentional or incidental learning on the immediate or retention tests between students receiving objectives with vague verbs and those receiving objectives with specific verbs.

This hypothesis was not rejected, as can be seen from the very low multivariate and univariate F ratios and high probabilities in Tables 4.1 and 4.2 (pp. 35-36). In other words, contrary to all the emphasis placed on using specific verb forms, specificity of verbs had no impact on student learning.

Hypothesis 3: There will be no significant difference in intentional or incidental learning on the immediate or retention tests between students receiving objectives with vague objects and those receiving objectives with specific objects.

Although the anticipated result of this hypothesis test was rejection, neither the multivariate nor the univariate F tests rejected the null. These results are presented in Tables 4.1 and 4.2 (pp. 35-36). Obviously students receiving vague objectives did just as well as students receiving specific objectives.

Hypothesis 4: There will be no significant reading X verb interaction effect for intentional or incidental learning on the immediate or retention tests.

As expected, this hypothesis was not rejected for either the multivariate or univariate F tests. See Tables 4.1 and 4.2 (pp. 35-36).

Hypothesis 5: There will be no significant reading X object interaction effect for intentional or incidental learning on the immediate or retention tests.

Although rejection was anticipated, the multivariate and univariate F tests failed to reject the null. Note the low F ratios and high probabilities on Tables 4.1 and 4.2 (pp. 35-36).

Hypothesis 6: There will be no significant verb X object interaction effect for intentional or incidental learning on the immediate or retention tests.

Neither the multivariate nor the univariate F tests negated the null, which was the anticipated result. See Tables 4.1 and 4.2 (pp. 35-36).

Hypothesis 7: There will be not significant reading X verb X object interaction effect for intentional or incidental learning.

As expected, this hypothesis was not rejected by either the multivariate or univariate F tests. See Tables 4.1 and 4.2 (pp. 35-36).

Immediate and Retention Tests Combined (repeated measures)

Hypothesis 8: There will be no significant difference in intentional or incidental learning between difference scores of students with different reading abilities.

As expected, the null was retained for both the multivariate and univariate F tests. These results are presented in Table 4.7.

TABLE 4.7

RESULTS OF THE MANOVA REPEATED MEASURES FOR THE WOMEN'S LIB ESSAY
(The dependent variable is the difference between the immediate and the retention scores.)

Source	df	Variable	Univariate F	Univariate p	Multivariate F	Multivariate p
Reading	2	Intentional	1.96	.146		
		Incidental	1.23	.297	1.62	.170
Verb	1	Intentional	.45	.505		
		Incidental	.63	.428	.51	.600
Object	1	Intentional	.41	.522		
		Incidental	.09	.764	.24	.786
Reading X Verb	2	Intentional	.72	.487		
		Incidental	.24	.791	.48	.750
Reading X Object	2	Intentional	2.15	.121		
		Incidental	.47	.628	1.26	.287
Verb X Object	1	Intentional	.05	.831		
		Incidental	.24	.629	.14	.866
Reading X Verb X Object	2	Intentional	.23	.795		
		Incidental	.94	.394	.60	.665

Hypothesis 9: There will be no significant difference in intentional or incidental learning between difference scores of students receiving objectives with vague verbs and those receiving objectives with specific verbs.

As can be seen from Table 4.7 (p. 44), the expected retention of the null was correct for both the multivariate and univariate F. Tests.

Hypothesis 10: There will be no significant difference in intentional or incidental learning between difference scores of students receiving objectives with vague objects and those receiving objectives with specific objects.

The anticipated result was again correct as neither the multivariate nor the univariate F tests were significant at the .05 level. See Table 4.7 (p. 44).

Hypothesis 11: There will be no significant reading X verb interaction effect of difference scores for intentional or incidental learning.

As expected, the null was retained for both the multivariate and univariate F Tests. See Table 4.7 (p. 44).

Hypothesis 12: There will be no significant reading X object interaction effect of difference scores for intentional or incidental learning.

The anticipated retention of the null held true, as can be seen by the multivariate and univariate F tests in Table 4.7 (p. 44).

Hypothesis 13: There will be no significant verb X object interaction effect of difference scores for intentional or incidental learning.

Neither the multivariate nor the univariate F tests were significant at the .05 level, so the null was not rejected. See Table 4.7 (p. 44).

Hypothesis 14: There will be no significant reading X verb X object interaction effect of difference scores for intentional or incidental learning.

As expected, the null was retained, since the multivariate and univariate F tests were not significant at the .05 level. See Table 4.7 (p. 44).

Walden Essay

Immediate and Retention Tests Uncombined

Hypothesis 1: There will be no significant difference in intentional or incidental learning on the immediate or retention tests between students of different reading abilities.

This hypothesis was rejected beyond the .05 level of significance for the multivariate (Immediate Test, $p < .0001$; Retention Test, $p < .006$) and univariate F tests. These results are shown in Tables 4.8 and 4.9, and the cell sizes, means, and standard deviations are shown in Tables 4.10, 4.11, 4.12, and 4.13. Note that, with few exceptions, the pattern is High > Medium > Low.

TABLE 4.8

RESULTS OF THE MANOVA FOR THE IMMEDIATE TEST ON THE WALDEN ESSAY

Source	df	Variable	Univariate F	Univariate p	Multivariate F	Multivariate p
Reading	2	Intentional	14.20	.0001		
		Incidental	4.26	.016	7.03	.0001
Verb	1	Intentional	.08	.779		
		Incidental	.27	.607	.25	.776
Object	1	Intentional	6.09	.015		
		Incidental	1.64	.202	5.65	.005
Reading X Verb	2	Intentional	.45	.638		
		Incidental	.42	.656	.57	.685
Reading X Object	2	Intentional	.15	.858		
		Incidental	.94	.394	.73	.573
Verb X Object	1	Intentional	2.30	.132		
		Incidental	1.14	.288	1.30	.276
Reading X Verb X Object	2	Intentional	.27	.768		
		Incidental	.09	.914	.14	.966

TABLE 4.9

RESULTS OF THE MANOVA FOR THE RETENTION TEST ON THE WALDEN ESSAY

Source	df	Variable	Univariate F	Univariate p	Multivariate F	Multivariate p
Reading	2	Intentional	5.31	.006		
		Incidental	6.09	.003	3.73	.006
Verb	1	Intentional	.02	.896		
		Incidental	.04	.842	.05	.950
Object	1	Intentional	3.32	.071		
		Incidental	.06	.803	2.41	.095
Reading X Verb	2	Intentional	.67	.513		
		Incidental	.79	.456	.95	.434
Reading X Object	2	Intentional	1.18	.312		
		Incidental	2.11	.126	1.72	.146
Verb X Object	1	Intentional	.09	.768		
		Incidental	.19	.666	.099	.906
Reading X Verb X Object	2	Intentional	1.37	.259		
		Incidental	.37	.691	.92	.453

TABLE 4.10

CELL SIZES, MEANS, AND STANDARD DEVIATIONS SHOWING THE EFFECT OF READING ABILITY ON THE INTENTIONAL ITEMS OF THE WALDEN IMMEDIATE TEST
(Maximum Score = 15)

Reading	Vague Verb Vague Object			Vague Verb Specific Object			Specific Verb Vague Object			Specific Verb Specific Object		
Ability	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.
High	12	10.67	1.83	9	11.11	2.42	10	9.50	1.27	10	11.20	1.32
Medium	14	9.64	2.13	13	10.07	2.78	13	9.76	2.89	14	10.64	2.90
Low	13	8.23	2.05	11	8.45	2.11	13	7.23	2.00	13	9.15	1.95

Total N = 145

TABLE 4.11

CELL SIZES, MEANS, AND STANDARD DEVIATIONS SHOWING THE EFFECT OF READING ABILITY ON THE INCIDENTAL ITEMS OF THE WALDEN IMMEDIATE TEST
(Maximum Score = 10)

Reading	Vague Verb Vague Object			Vague Verb Specific Object			Specific Verb Vague Object			Specific Verb Specific Object		
Ability	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.
High	12	8.58	1.44	9	8.00	1.80	10	8.30	.95	10	8.50	1.08
Medium	14	8.07	1.64	13	7.92	1.98	13	7.85	1.07	14	8.00	1.92
Low	13	7.69	.85	11	6.45	2.16	13	7.85	1.52	13	7.38	2.22

Total N = 145

TABLE 4.12

CELL SIZES, MEANS, AND STANDARD DEVIATIONS SHOWING THE EFFECT OF READING ABILITY ON THE INTENTIONAL ITEMS OF THE WALDEN RETENTION TEST (Maximum Score = 15)

Reading	Vague Verb Vague Object			Vague Verb Specific Object			Specific Verb Vague Object			Specific Verb Specific Object		
Ability	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.
High	7	9.43	2.37	7	9.29	2.14	10	8.50	2.32	7	11.00	1.83
Medium	14	8.71	2.87	13	9.38	2.90	12	10.08	3.15	12	9.42	2.87
Low	9	7.33	2.00	7	9.00	2.08	11	6.64	2.29	11	8.36	3.07

Total N = 120

TABLE 4.13

CELL SIZES, MEANS, AND STANDARD DEVIATIONS SHOWING THE EFFECT OF READING ABILITY ON THE INCIDENTAL ITEMS OF THE WALDEN RETENTION TEST
(Maximum Score = 10)

Reading	Vague Verb Vague Object			Vague Verb Specific Object			Specific Verb Vague Object			Specific Verb Specific Object		
Ability	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D	n	$\bar{x}$	S.D.
High	7	9.00	.82	7	8.00	.82	10	8.20	1.48	7	7.42	1.51
Medium	14	8.00	1.52	13	7.92	2.14	12	8.41	1.16	12	8.00	1.35
Low	9	6.78	1.20	7	7.00	1.15	11	6.54	2.62	11	7.63	1.86

Total N = 120

Hypothesis 2: There will be no significant difference in intentional or incidental learning on the immediate or retention tests between students receiving objectives with vague verbs and those receiving objectives with specific verbs.

As expected, this hypothesis was not rejected at the .05 level of significance. Tables 4.8 and 4.9 (pp. 47-48) show the very low F ratios and the high probabilities that the small differences between groups were due to chance. Specificity of verbs had no significant effect on student learning.

Hypothesis 3: There will be no significant difference in intentional or incidental learning on the immediate or retention tests between students receiving objectives with vague verbs and those receiving objectives with specific verbs.

The anticipated rejection of all parts of this hypothesis did not occur, but several parts were rejected at the .05 level and two other parts were below the .10 level of significance. As can be seen in Table 4.8 p. 47), the multivariate F test for specificity of object was significant at the .005 level and the univariate F test for intentional learning was significant at the .015 level. However, the univariate F test for incidental learning was only significant at the .202 level. The effect of object specificity for intentional learning is evident in the cell means, which are presented in Table 4.14. Note that in every category the students receiving objectives with specific objects outscored students receiving objectives with vague objects.

TABLE 4.14

CELL SIZES, MEANS, AND STANDARD DEVIATIONS SHOWING THE EFFECT OF OBJECT SPECIFICITY ON THE INTENTIONAL ITEMS OF THE WALDEN IMMEDIATE TEST
(Maximum Score = 15)

Specificity of Object	Vague Verb High Reading			Vague Verb Medium Reading			Vague Verb Low Reading			Specific Verb High Reading			Specific Verb Medium Reading			Specific Verb Low Reading		
	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.
Vague	12	10.67	1.83	14	9.64	2.13	13	8.23	2.05	10	9.50	1.27	13	9.76	2.89	13	7.23	2.00
Specific	9	11.11	2.42	13	10.07	2.78	11	8.45	2.11	10	11.20	1.32	14	10.64	2.90	13	9.15	1.95

Total N = 145

Specificity of object did not have as large an effect on the retention test as it did on the immediate test, but the multivariate F ratio ($p < .095$) and univariate F ratio for intentional learning ($p < .071$) are both below .10. See Table 4.9 (p. 48). The cell means are presented in Table 4.15. Note that in only two of the six categories did students receiving vague objects outscore those receiving specific objects.

Hypothesis 4: There will be no significant reading X verb interaction effect for intentional or incidental learning on the immediate or retention tests.

As can be seen from Tables 4.8 and 4.9 (pp. 47-48), the expected result occured. Neither the multivariate nor the univariate F tests were significant at the .05 level.

Hypothesis 5: There will be no significant reading X object interaction effect for intentional or incidental learning.

The anticipated rejection of the null did not occur, as can be seen from the multivariate and univariate F ratios and probabilities in Tables 4.8 and 4.9 (pp. 47-48). In other words, the advantage of specific objects had the same effect on students of different reading ability rather than having a greater effect on students with low reading ability.

Hypothesis 6: There will be no significant verb X object interaction effect for intentional or incidental learning on the immediate or retention tests.

As expected, this null was not rejected by either the multivariate or univariate F tests. See Tables 4.8 and 4.9 (pp. 47-48).

TABLE 4.15

CELL SIZES, MEANS, AND STANDARD DEVIATIONS SHOWING THE EFFECT OF OBJECT SPECIFICITY ON THE INTENTIONAL ITEMS OF THE WALDEN RETENTION TEST
(Maximum Score = 15)

Specificity of Object	Vague Verb High Reading			Vague Verg Medium Reading			Vague Verb Low Reading			Specific Verb High Reading			Specific Verb Medium Reading			Specific Verb Low Reading		
	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.
Vague	7	9.43	2.37	14	8.72	2.87	9	7.33	2.00	10	8.50	2.32	12	10.08	3.15	11	6.64	2.29
Specific	7	9.29	2.14	13	9.38	2.90	7	9.00	2.08	7	11.00	1.83	12	9.42	2.87	11	8.36	3.07

Total N - 120

Hypothesis 7: There will be no significant reading X verb X object interaction effect for intentional or incidental learning.

Once again, the anticipated outcome proved correct as the null was not rejected by either the multivariate or univariate F tests. See Tables 4.8 and 4.9 (pp. 47-48).

Immediate and Retention Tests Combined (repeated measures)

Hypothesis 8: There will be no significant difference in intentional or incidental learning between difference scores of students with different reading abilities.

As expected, the null was retained for both the multivariate and univariate F tests. These results are presented in Table 4.16.

Hypothesis 9: There will be no significant difference in intentional or incidental learning between difference scores of students receiving objectives with vague verbs and those receiving objectives with specific verbs.

Neither the multivariate nor univariate F tests showed significance at the .05 level, which was the expected outcome. See Table 4.16 (p. 58).

Hypothesis 10: There will be no significant difference in intentional or incidental learning between difference scores of students receiving objectives with vague objects and those receiving objectives with specific objects.

The anticipated result again proved true, as can be seen by the multivariate and univariate F rations and probabilities in Table 4.16 (p. 58).

Hypothesis 11: There will be no significant reading X verb interaction effect of difference scores for intentional or incidental learning.

TABLE 4.16

RESULTS OF THE MANOVA REPEATED MEASURES FOR THE WOMEN'S LIB ESSAY
(The dependent variable is the difference between
the immediate and the retention scores.)

Source	df	Variable	Univariate F	Univariate p	Multivariate F	Multivariate p
Reading	2	Diff. Intentional	.37	.690		
		Diff. Incidental	1.66	.195	1.05	.384
Verb	1	Diff. Intentional	.50	.480		
		Diff. Incidental	.43	.513	.43	.649
Object	1	Diff. Intentional	.37	.544		
		Diff. Incidental	.13	.722	.23	.792
Reading X Verb	2	Diff. Intentional	.29	.750		
		Diff. Incidental	.42	.661	.35	.843
Reading X Object	2	Diff. Intentional	.72	.489		
		Diff. Incidental	6.25	.003	3.48	.009
Verb X Object	1	Diff. Intentional	.39	.535		
		Diff. Incidental	.65	.424	.55	.581
Reading X Verb X Object	2	Diff. Intentional	2.42	.094		
		Diff. Incidental	.58	.563	1.50	.205

This hypothesis was also retained, as shown in Table 4.16 (p. 58).

Hypothesis 12: There will be no significant reading X object interaction effect of difference scores for intentional or incidental learning.

Although the anticipated result was that this hypothesis would be retained, it was rejected beyond the .05 level on the multivariate ($p < .009$) and incidental univariate tests ($p < .003$). See Table 4.16 (p. 58).

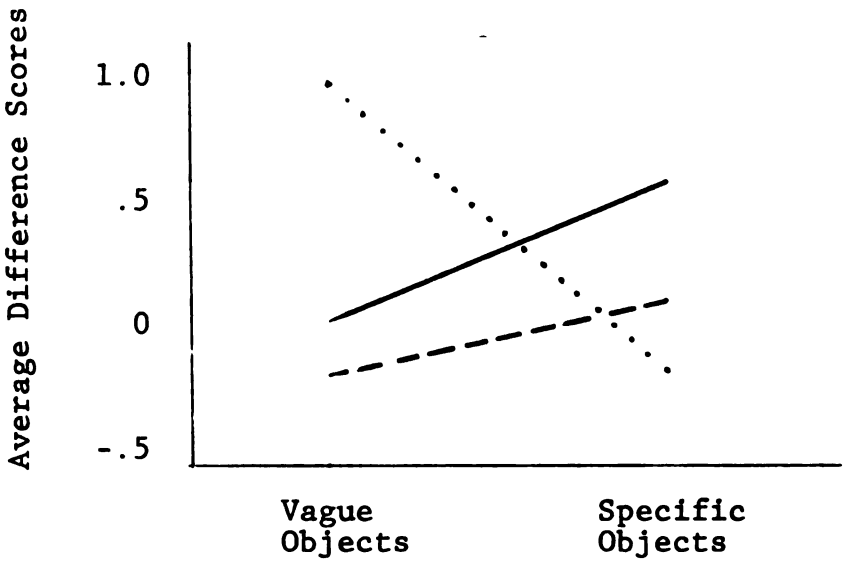
TABLE 4.17

COMBINED MEANS* SHOWING INTERACTION EFFECT OF READING ABILITY AND SPECIFICITY OF OBJECTS FOR INCIDENTAL LEARNING ON WALDEN DIFFERENCE SCORES

Reading	Specificity of Object	
	Vague	Specific
High	.0588	.6429
Medium	-.1923	.1600
Low	1.0000	-.1667

* Each mean combines difference scores between immediate and retention tests.

FIGURE 4.1
INTERACTION EFFECT OF READING ABILITY AND SPECIFICITY OF OBJECTS FOR INCIDENTAL LEARNING ON WALDEN DIFFERENCE SCORES
(immediate score - retention score)



____ High Reading Ability

---- Medium Reading Ability

.... Low Reading Ability

As illustrated in Table 4.17 (p. 59) and Figure 4.1 (p. 60), students with high and medium reading ability who received objectives with specific objects had greater differences between their immediate and retention tests than did high and medium reading ability students who received objectives with vague objects. In contrast, students with low reading ability who received objectives with specific objects had smaller differences between their immediate and retention tests than did low reading ability students who received objectives with vague objects. Putting it another way, low reading ability students were aided by specific objects as far as retaining incidental material, whereas high and medium reading ability students were apparently hindered by the specific objects.

It should be noted, however, that all the combined means in Figure 4.1 (p. 60) are very small. There were ten incidental test items and only one subgroup, low reading ability students receiving vague objects, averaged a loss of one correct answer between the immediate and the retention test. In other words, very few students' scores changed greatly over one week's time.

To further complicate the interpretation of this interaction effect, two subgroups actually did better on the retention test than they did on the immediate test. (Note that medium reading ability students receiving vague objects and low reading ability students receiving specific objects have negative means.) This may be due to a confounding

variable: students discussing the essay and the test questions between the immediate and retention tests. Nevertheless, the fact remains that specific objectives had a significantly different effect on low reading ability students' retention of incidental learning than they did on such retention by medium and high reading ability students.

Hypothesis 13: There will be no significant verb X object interaction effect of difference scores for intentional or incidental learning.

As expected, this null was retained. See the multivariate and univariate F ratios and probabilities in Table 4.16 (p.58).

Hypothesis 14: There will be no significant reading X verb X object interaction effect of difference scores for intentional or incidental learning.

This last hypothesis was also retained, as can be seen in Table 4.16 (p. 58).

Summary

The results of the hypotheses tests are summarized in five sections: effect of reading ability, effect of verb specificity, effect of object specificity, effect of interactions, and effect of variables on retention.

Effect of Reading Ability

Although this variable by itself was not of primary importance in this experiment, it did prove to affect both intentional and incidental learning on immediate and retention tests. One side benefit of this effect is that it helps

validate the tests used in the experiment. Students who did well on the standardized test also did well on the teacher made test.

Effect of Verb Specificity

Specificity of verbs had no effect on student learning of either intentional or incidental material in either essay.

Effect of Object Specificity

This factor was irrelevant on the Women's Lib tests but relevant with regard to intentional learning on the Walden immediate test. It also had a positive influence on intentional learning on the retention test, but there is a greater chance the effect is due to chance. ($p < .071$ vs. $p < .015$).

Effect of Interactions

The only interaction significant at the .05 level was the reading X object interaction on the repeated measures analysis. Although student scores generally changed very little between the immediate and retention tests, students with low reading ability were apparently aided by specific objects, in contrast with medium and high ability students, whose retention scores dropped less when they received vague objects.

Effect of Variables on Retention

Other than the interaction effect noted above, the variables had the same or nearly the same effects on the

retention test as they did on the immediate test. Superior or equal relationships between subgroup scores had little or no change during the week between tests.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND IMPLICATIONS FOR FURTHER RESEARCH

This chapter contains a discussion of possible weaknesses in the study, the main conclusions and implications for teaching, and implications for further research.

Discussion of Possible Weaknesses in the Study

Looking back on this study with the benefit of experience, three weaknesses seem apparent that could have been avoided or at least minimized.

First, the dependent variables were inferior in several respects. As noted in Chapter III, their internal reliability according to the Kuder-Richardson 21 formula was below .60. Test-retest reliability correlations were higher (.81 for Women's Lib and .69 for Walden), but both types of reliability were checked after the experiment rather than before it. Consequently, the correlations are somewhat influenced by treatment effects. Had the tests been administered to another group of students before the experiment, the reliability figures would be more accurate and efforts could have been made to improve the tests.

The tests were also weak in that they overemphasized lower level cognitive learning. This is particularly true of the Women's Lib test, which had only three items above the Knowledge level (see Table 3.3, p. 26). Edwin Anderson (1975), commenting on the significant interaction effect between item difficulty and the presence of specific objectives in his study involving psychology text reading, says

> We need to focus our analysis on the more sensitive test items if we are to detect the full effect of our treatment. Ceiling effects work against the detection of differences between the treatment and a control condition and lead us to conclude that our treatment is not effective when in fact it may be quite effective (p. 7).

The large number of relatively easy questions and the relatively high mean and low variance on the total score of the Women's Lib immediate test ($\bar{x}$ = 19.15, S^2 = 10.27, N = 165) suggest that a ceiling effect may have occured. In contrast, the Walden test had fewer items at the Knowledge level (see Table 3.3 p. 26), a lower mean ($\bar{x}$ = 17.46), and a higher variance (S^2 = 11.71).

A second possible weakness in the study is that student unfamiliarity with behavioral objectives may have contributed to both the lack of significance on the Women's Lib test and the significant results for object specificity on the Walden test. Several writers (e.g., Yelon and Schmidt, 1973; Bassett and Kibler, 1974; and Moody, 1974) have suggested that behavioral objectives are relatively worthless unless students are trained to use them. Bassett and

Kibler's study supports this view with research on college freshmen in a human communications theory class. When specific objectives were provided for a unit of instruction, students trained to use objectives scored significantly higher on an exam of intentional learning than students who had not been trained.

Had students in the present study been so trained, perhaps those receiving specific objects before reading the Women's Lib essay would have benefited more from them. After taking the Women's Lib test, however, these students may have realized the importance of the specific objects and consequently applied this new insight when they read the Walden essay.

The third weakness in the study concerns the unequal cell sizes. A balanced design was intended, but the small sizes of a few cells would have meant a great loss of data if the cells had been balanced by random omissions. One reason for these small sizes is lack of foresight in scheduling the experiments: several sessions were held on opening day of deer season, which in Michigan is an unofficial holiday for many students!

Conclusions and Implications for Teaching

1. Since specificity of verbs had no influence on student learning from essays in freshman English, the emphasis on such specificity by Mager (1962) and others

appears to be excessive for this purpose. Even though all will admit that "know" is less clear than "given a statement, be able to decide if it is true or false," the difference may not be as important to the students as many educators have assumed.

2. Behavioral objectives did help students learn from a difficult essay, and the object portion of the objectives rather than the verb portion was the cause. This finding suggests that giving students directions before reading assignments to "look for the writer's views on legalizing marijuana" or "try to understand why the writer dislikes television" may be more helpful than specialists in writing behavioral objectives would think. If the object of an objective is reasonably clear, the specific verb and conditions for future testing may be of little importance.

3. Incidental learning on immediate tests was not adversely affected by specific behavioral objectives. This finding goes against the view of Atkins (1968) and others, who believe specific objectives inhibit the learning of incidental material, and it supports the view of Kaplan and Rothkopf (1972), who feel specific objectives do not interfere with incidental learning. On retention tests, objectives with specific objects had mixed results, giving an advantage to readers with low ability and a disadvantage to readers with medium and high ability. Since the advantage to the former was of greater magnitude than the disadvantage to the latter (see Figure 4.1, p. 60) it seems more

reasonable to provide specific objectives in the hope of helping poor readers than using vague or no objectives for fear of hindering better readers.

4. Objectives with specific objects only affected learning on the more difficult of the two essays and tests. The Women's Lib test was easier than the Walden test, and the Women's Lib essay covered material more familiar and probably more interesting to most students. Furthermore, it was more clearly organized. This result coincides with the views of Cook (1971) and Jenkins and Deno (1971), who suggest that specific objectives given before prose material are more help when the material is more abstract. Perhaps the best implication for teaching is the generalization often cited on the basis of common sense and years of experience: students need more help with more difficult material.

5. When objectives with specific objects made a difference, as they did on several Walden tests (immediate test: multivariate $p < .005$, univariate intentional $p < .015$; retention test: multivariate $p < .095$, univariate intentional $p < .071$), the effects were the same for students of all reading ability levels (i.e., there was no reading X object interaction). Therefore, it seems unnecessary to focus specific objects on students with low reading ability, which was an expected recommendation when this study was conceived. All students evidently benefit from instructional objectives with specific objects.

6. As a final conclusion, the results of this study offer hope for helping students deal with difficult prose material. Although the verb portion of instructional objectives appears to have no value to students, the use of specific language in the object portion can have a positive effect on student learning of intentional material and either a positive, neutral, or slightly negative effect on their learning of incidental material. Therefore, instead of helping students learn from their reading by making their reading easier, as many textbook publishers are doing, we might better concentrate on providing students with more specific directions when we give reading assignments. In this way we can let students reap the full benefits of reading original prose by excellent writers, rather than limit students to watered-down versions.

Implications for Further Research

1. Replicated research should be conducted with other difficult essays to see how far the significant effect of specific objects on learning from Walden can be generalized.

2. Replicated research should be conducted after instructing students in the use of behavioral objectives.

3. More research should be conducted with difficult prose along the lines suggested by Edwin Anderson (1975), focusing analyses on the more sensitive test items to avoid ceiling effects.

4. More research with difficult prose material is needed to test the effect of specific objectives on various levels of the cognitive domain, particularly those above the Knowledge level. This research could answer a question such as the following: "Do specific objectives help more for comprehending figurative language or for recalling specific facts?"

APPENDIX A

WOMEN'S LIB ESSAY

WHAT IT WOULD BE LIKE IF WOMEN WIN

by

Gloria Steinem

Any change is fearful, especially one affecting both politics and sex roles, so let me begin these utopian speculations with a fact. To break the ice.

Women don't want to exchange places with men. Male chauvinists, science-fiction writers and comedians may favor that idea for its shock value, but psychologists say it is a fantasy based on ruling-class ego and guilt. Men assume that women want to imitate them, which is just what white people assumed about blacks. An assumption so strong that it may convince the second-class group of the need to imitate, but for both women and blacks that stage has passed. Guilt produces the questions: What if they could treat us as we have treated them?

That is not our goal. But we do want to change the economic system to one more based on merit. In Women's Lib Utopia, there will be free access to good jobs--and decent pay for the bad ones women have been performing all along, including housework. Increased skilled labor might lead to a four-hour workday, and higher wages would encourage further mechanization of repetitive jobs now kept alive by cheap labor.

With women as half the country's elected representatives, and a woman President once in a while, the country's machismo problems would be greatly reduced. The old-fashioned idea that manhood depends on violence and victory is, after all, an important part of our troubles in the streets, and in Viet Nam. I'm not saying that women leaders would eliminate violence. We are not more moral than men; we are only uncorrupted by power so far. When we do acquire power, we might turn out to have an equal impulse toward aggression. Even now, Margaret Mead believes that women fight less often but more fiercely than men, because women are not taught the rules of the war game and fight only when cornered. But for the next 50 years or so, women in politics

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A leader in the Women's Liberation movement, Gloria Steinem is contributing editor for the New York magazine. A Phi Beta Kappa graduate of Smith College, she has written for most national magazines and was named "Woman of the Year" in 1971 by Theta Sigma Phi, a national woman's professional sorority.

will be very valuable by tempering the idea of manhood into something less aggressive and better suited to this crowded, post-atomic planet. Consumer protection and children's rights, for instance, might get more legislative attention.

Men will have to give up ruling-class privileges, but in return they will no longer be the only ones to support the family, get drafted, bear the strain of power and responsibility. Freud to the contrary, anatomy is not destiny, at least not for more than nine months at a time. In Israel, women are drafted, and some have gone to war. In England, more men type and run switchboards. In India and Israel, a woman rules. In Sweden, both parents take care of the children. In this country, come Utopia, men and women won't reverse roles; they will be free to choose according to individual talents and preferences.

If role reform sounds sexually unsettling, think how it will change the sexual hypocrisy we have now. No more sex arranged on the barter system with women pretending interest, and men never sure whether they are loved for themselves or for the security few women can get any other way. (Married or not, for sexual reasons or social ones, most women still find it second nature to Uncle-Tom.) No more men who are encouraged to spend a lifetime living with inferiors; with housekeepers, or dependent creatures who are still children. No more domineering wives, emasculating women, and "Jewish mother," all of whom are simply human beings with all their normal ambition and drive confined to the home. No more unequal partnerships that eventually doom love and sex.

In order to produce that kind of confidence and individuality, child bearing will train according to talent. Little girls will no longer be surrounded by air-tight, self-fulfilling prophecies of natural passivity, lack of ambition and objectivity, inability to exercise power, and dexterity (so long as special aptitude for jobs requiring patience and dexterity is confined to poorly paid jobs; brain surgery is for males).

Schools and universities will help to break down traditional sex roles, even when parents will not. Half the teachers will be men, a rarity now at preschool and elementary levels; girls will not necessarily serve cookies or boys hoist up the flag. Athletic teams will be picked only by strength and skill. Sexually segregated courses like auto mechanics and home economics will be taken by boys and girls together. New courses in sexual politics will explore female subjugation as the model for political oppression, and women's history will be an academic staple, along with black history, at least until the white-male-oriented textbooks are integrated and rewritten.

As for the American child's classic problem--too much mother, too little father--that would be cured by an equalization of parental responsibility. Free nurseries, school lunches, family cafeterias built into every housing complex, service companies that will do household cleaning chores in a regular businesslike way, and more responsibility by the entire community for the children: all these will make it possible for both mother and father to work, and to have equal leisure time with the children at home. For parents of very young children, however, a special job category, created by Government and unions, would allow such parents a shorter work day.

The revolution would not take away the option of being a housewife. A woman who prefers to be her husband's housekeeper and/or hostess would receive a percentage of his pay determined by the domestic relations courts. If divorced, she might be eligible for a pension fund, and for a job-training allowance. Or a divorce could be treated the same way that the dissolution of a business partnership is now.

If these proposals seem farfetched, consider Sweden, where most of them are already in effect. Sweden is not yet a working Women's Lib model; most of the role-reform programs began less than a decade ago, and are just beginning to take hold. But that country is so far ahead of us in recognizing the problem that Swedish statements on sex and equality sound like bulletins from the moon.

Our marriage laws, for instance, are so reactionary that Women's Lib groups want couples to take a compulsory written exam on the law, as for a driver's license, before going through with the wedding. A man has alimony and wifely debts to worry about, but a woman may lose so many of her civil rights that in the U.S. now, in important legal ways, she becomes a child again. In some states, she cannot sign credit agreements, use her maiden name, incorporate a business, or establish a legal residence of her own. Being a wife, according to most social and legal definitions, is still a 19th century thing.

Assuming, however, that these blatantly sexist laws are abolished or reformed, that job discrimination is forbidden, that parents share financial responsibility for each other and the children, and that sexual relationships become partnerships of equal adults (some pretty big assumptions), then marriage will probably go right on. Men and women are, after all, physically complementary. When society stops encouraging men to be exploiters and women to be parasites, they may turn out to be more complementary in emotion as well. Women's Lib is not trying to destroy the American family. A look at the statistics on divorce--plus the way in which old people are farmed out with strangers and young

people flee the home--shows the destruction that has already been done. Liberated women are just trying to point out the disaster, and build compassionate and practical alternatives from the ruins.

What will exist is a variety of alternative life-styles. Since the population explosion dictates that childbearing be kept to a minimum, parents-and-children will be only one of many "families": couples, age groups, working groups, mixed communes, blood-related clans, class groups, creative groups. Single women still have the right to stay single without ridicule, without the attitudes now betrayed by "spinster" and "bachelor." Lesbians or homosexuals will no longer be denied legally binding marriages, complete with mutual-support agreements and inheritance rights. Paradoxically, the number of homosexuals may get smaller. With fewer over-possessive mothers and fewer fathers who hold up an impossible cruel or perfectionist idea of manhood, boys will be less likely to be denied or reject their identity as males.

Changes that now seem small may get bigger:

MEN'S LIB

Men now suffer from more diseases due to stress, heart attacks, ulcers, a higher suicide rate, greater difficulty living alone, less adaptability to change and, in general, a shorter life span than women. There is some scientific evidence that what produces physical problems is not work itself, but the inability to choose which work, and how much. With women bearing half the financial responsibility, and with the idea of "masculine" jobs gone, men might well feel freer and live longer.

RELIGION

Protestant women are already becoming ordained ministers; radical nuns are carrying out liturgical functions that were once the exclusive property of priests: Jewish women are rewriting prayers--particularly those that Orthodox Jews recite every morning thanking God they are not females. In the future, the church will become an area of equal participation by women. This means, of course, that organized religion will have to give up one of its great historical weapons: sexual repression. In most structured faiths, from Hinduism through Roman Catholicism, the status of women went down as the position of priests ascended. Male clergy implied, if they did not teach, that women were unclean, unworthy and sources of ungodly temptation, in order to remove them as rivals for the emotional forces of

men. Full participation of women in ecclesiastical life might involve certain changes in theology, such as, for instance, a radical redefinition of sin.

LITERARY PROBLEMS

Revised sex roles will outdate more children's books than civil rights ever did. Only a few children had the problem of a Little Black Sambo, but most have the male-female stereo-types of "Dick and Jane." A boomlet of children's books about mothers who work has already begun, and liberated parents and editors are beginning to pressure for change in the textbook industry. Fiction writing will change more gradually, but romantic novels with wilting heroines and swashbuckling heroes will be reduced to historical value. Or perhaps to the sado-masochist trade. (Marjorie Morningstar, a romantic novel that took the '50s by storm, has already begun to seem as unreal as its '20s predecessor, The Sheik.) As for literary plots that turn on forced marriages or horrific abortions, they will seem as dated as Prohibition stories. Free legal abortions and free birth control will force writers to give up pregnancy as the deus ex machina.

MANNERS AND FASHIONS

Dress will be more androgynous, with class symbols becoming more important than sexual ones. Pro- or anti-Establishment styles may already be more vital than who is wearing them. Hardhats are just as likely to rough up antiwar girls as antiwar men in the street, and police understand that women are just as likely to be pushers or bombers. Dances haven't required that one partner lead the other for years, anyway. Chivalry will transfer itself to those who need it, or deserve respect: old people, admired people, anyone with an armload of packages. Women with normal work identities will be less likely to attach their whole sense of self to youth and appearance; thus there will be fewer nervous breakdowns when the first wrinkles appear. Lighting cigarettes and other treasured niceties will become gestures of mutual affection. "I like to be helped on with my coat," says one Women's Lib worker, "but not if it costs me $2,000 a year in salary."

For those with nostalgia for a simpler past, here is a word of comfort. Anthropologist Geoffrey Gorer studies the few peaceful human tribes and discovered one common characteristic: sex roles were not polarized. Differences of dress and occupation were at a minimum. Society, in other words, was not using sexual blackmail as a way of getting women to do cheap labor or men to be aggressive.

Thus Women's Lib may achieve a more peaceful society on the way toward its other goals. That is why the Swedish government considers reform to bring about greater equality in the sex roles one of its most important concerns. As Prime Minister Olof Palme explained in a widely ignored speech delivered in Washington this spring: "It is human beings we shall emancipate. In Sweden today, if a politician should declare that the woman ought to have a different role from man's, he would be regarded as something from the Stone Age." In other words, the most radical goal of the movement is egalitarianism.

If Women's Lib wins, perhaps we all do.

APPENDIX B

OBJECTIVES FOR THE WOMEN'S LIB ESSAY

(vague verbs - vague objects)

INSTRUCTIONS

This is an exercise to determine your ability to read and understand a few pages of college level material. Keep the objectives in mind as you read the assignment. You will use this material later for class discussion and possibly as an essay topic.

It's OK to take notes on this page and/or write on the reading material itself. When you are through reading and have reviewed the objectives, put this page and the reading material in the envelope, bring it to the desk, and pick up a test.

Objectives - After reading these pages, you should:

1. Understand Steinem's views.

2. Know important facts from the essay.

(vague verbs - specific objects)

INSTRUCTIONS

This is an exercise to determine your ability to read and understand a few pages of college level material. Keep the objectives in mind as you read the assignment. You will use this material later for class discussion and possibly as an essay topic.

It's OK to take notes on this page and/or write on the reading material itself. When you are through reading and have reviewed the objectives, put this page and the reading material in the envelope, bring it to the desk, and pick up a test.

Objectives - After reading these pages, you should:

1. Know what Steinem feels are problems and trends in literature.

2. Understand why Steinem thinks an increase in women as elected representatives might deemphasize violence and victory.

3. Know what Steinem thinks will be the effects of women's liberation on homosexuals.

4. Understand what Steinem thinks will be the effects of women's liberation on the health of men and women.

5. Know some alternative life styles to the typical family (parents and children).

6. Know the most radical goal of the women's liberation movement, according to Steinem.

7. Know Steinem's recommendation for working parents of young children.

8. Know if Steinem thinks women want to change places with men.

(specific verbs - vague objects)

INSTRUCTIONS

This is an exercise to determine your ability to read and understand a few pages of college level material. Keep the objectives in mind as you read the assignment. You will use this material later for class discussion and possibly as an essay topic.

It's OK to take notes on this page and/or write on the reading material itself. When you are through reading and have reviewed the objectives, put this page and the reading material in the envelope, bring it to the desk, and pick up a test.

Objectives - After reading these pages, you should be able to perform the following tasks:

1. Given groups of four statements, choose the one from each group that best explains Steinem's view or identifies a fact from the essay.

2. Given several statements, determine which ones are true with regard to Steinem's views or facts from the essay.

(specific verbs - specific objects)

INSTRUCTIONS

This is an exercise to determine your ability to read and understand a few pages of college level material. Keep the objectives in mind as you read the assignment. You will use this material later for class discussion and possibly as an essay topic.

It's OK to take notes on this page and/or write on the reading material itself. When you are through reading and have reviewed the objectives, put this page and the reading material in the envelope, bring it to the desk, and pick up a test.

Objectives - After reading these pages, you should be able to perform the following tasks:

1. Given four statements, choose the one that tells what Steinem feels are problems and trends in literature.

2. Given four statements, choose the one that tells why Steinem feels an increase in women as elected representatives might deemphasize violence and victory.

3. Given a statement, determine if it is true or false with regard to Steinem's reason why more women representatives might deemphasize violence and victory.

4. Given four statements, choose the one that tells what Steinem thinks will be the effect of women's liberation on homosexuals.

5. Given a statement, determine if it is true or false with regard to Steinem's prediction of the effect of women's liberation on homosexuals.

6. Given four statements, choose the one that tells what Steinem thinks will be the effect of women's liberation on the health of men and women.

7. Given a statement, determine if it is true or false with regard to Steinem's prediction on the effects of women's liberation on the health of men and women.

8. Given four statements, determine which ones are mentioned as alternative life styles to the typical family (parents and children).

9. Given a statement, determine if it is true or false with regard to life styles mentioned as alternatives to the typical family.

10. Given four statements, choose the one Steinem feels is the most radical goal of the women's liberation movement.

11. Given four statements, choose the one that gives Steinem's recommendation for working parents of young children.

12. Given a statement, determine if it is true or false with regard to Steinem's feeling about women changing places with men.

APPENDIX C

TEST ON THE WOMEN'S LIB ESSAY

Test on "What It Would be Like if Women Win"

Directions: Record your answers on the answer sheet by blackening in the appropriate space with a #2 pencil. Please don't write on the test.

Multiple Choice

1. Steinem believes that more women as elected representatives would deemphasize violence and victory because women
   A. are basically more moral than men.
   B. are not yet corrupted by power.
   C. fight less fiercely than men.
   D. fight by the rules more often than men.

2. Which of the following areas does Steinem feel would get more attention if half the country's elected representatives were women?
   A. Consumer protection.
   B. Crime in the streets, particularly rape.
   C. Rules of war.
   D. Protection of the environment.

3. What country does Steinem use as an example of a place where many men type and run switchboards?
   A. Sweden.
   B. England.
   C. Israel.
   D. India.

4. Which of the following is one of Steinem's reasons why men may live longer if women's lib wins?
   A. Women will bear half the finanical responsibility.
   B. More women in medicine will help find ways to eliminate heart attacks.
   C. Men will retire earlier than they do now.
   D. Women won't irritate men so much with minor problems.

5. If Steinem's view of the future is correct, the number of homosexuals will
   A. stay the same, but they will be better accepted by society.
   B. increase, because they will be better accepted by society.
   C. decrease, because of fewer overpossesive mothers.
   D. increase, because they will be allowed to marry.

6. Which of the following is NOT mentioned as a future trend in literature?
   A. More plots in which horrible abortions are important.
   B. More children's books about women who work.
   C. Less novels with swashbuckling heroes and wilting heroines.
   D. Fewer plots in which forced marriages are important.

7. Which of the following is NOT mentioned as an alternative life style to today's typical family (parents and children)?
   A. Blood related clans.
   B. Mixed communes.
   C. Couples.
   D. Religious groups.

8. How would Steinem probably react to a woman who chose to be a housewife:
   A. Urge her to reconsider her choice in order to lead a more interesting life.
   B. Advise her to consider a divorce in order to be free from a dominant husband.
   C. Approve of her choice if she gets part of her husband's pay.
   D. Urge her to at least get a part-time job to avoid feeling trapped.

9. One authority mentioned by Steinem is Geoffrey Gorer, a (an)
   A. biologist.
   B. sociologist.
   C. anthropologist.
   D. theologist.

10. According to Steinem, the most radical goal of the women's liberation movement is
   A. socialism.
   B. idealism.
   C. egalitarianism.
   D. communism.

11. Steinem thinks parents of very young children should
   A. not have to work until their children are in school.
   B. be allowed to have a shorter work day.
   C. be able to work different shifts so that one could always be home.
   D. leave their children with full-time housewives.

12. In what religion is there a morning prayer in which men thank God they are not female?
    A. Hinduism.
    B. Roman Catholicism.
    C. Orthodox Judaism.
    D. Baptist.

13. What literary problem does Steinem see in children's books?
    A. Many books are about mothers who work.
    B. Many have male - female stereotypes for characters.
    C. There is too much pressure put on editors by parents.
    D. Many, such as Little Black Sambo, are racist.

14. In the future, according to Steinem, women will have fewer nervous breakdowns when wrinkles first appear because women will
    A. be treated with respect instead of ridicule.
    B. not care how they look anymore.
    C. believe that they are superior to men in spite of their wrinkles.
    D. base their lives more on their work than on their appearance.

TRUE-FALSE (On your answer sheet, use "a" for TRUE and "b" for FALSE.)

15. Contrary to some writers, Steinem believes women don't want to change places with men.

16. Steinem feels women should receive pay for housework.

17. Steinem thinks full participation of women in organized religion would make the Catholic Church more like the Hindu religion with regard to men's attitude toward women.

18. When Steinem says dress will be more 'androgynous,' she means men and women will dress more alike.

19. In peaceful human tribes, sex differences in dress and occupation are generally more noticeable than in our society.

20. Steinem believes one effect of women winning their fight for liberation will be legalization of homosexual marriages.

21. According to Steinem, the number of homosexuals may get larger in the future because there will be fewer overpossessive mothers.

22. Unlike some women's lib leaders who look rather masculine, Steinem thinks it would be good if women were more concerned with their appearance.

23. Steinem says women even want to change the economic system.

24. Steinem thinks mixed communes would be one alternative to the typical family (parents and children).

25. According to Steinem, it would be good to have more women elected to office because women are generally more moral than men.

NOTE: (Incidental questions are: 2, 3, 8, 9, 12, 16, 17, 18, 19, and 23).

APPENDIX D

WALDEN ESSAY

The following paragraphs are taken from Walden, by Henry David Thoreau. In this book, which was published in 1854, Thoreau tells how and why he built a house and lived alone in the woods for two years. He also gives his opinions on various subjects.

"My furniture, part of which I made myself, and the rest cost me nothing of which I have not rendered an account, consisted of a bed, a table, a desk, three chairs, a looking-glass three inches in diameter, a pair of tongs and andirons, a kettle, a skillet, and a frying-pan, a dipper, a washbowl, two knives and forks, three plates, one cup, one spoon, a jug for oil, a jug for molasses, and a japanned lamp. None is so poor that he need sit on a pumpkin. That is shiftlessness. There is a plenty of such chairs as I like best in the village garrets to be had for taking them away. Furniture! Thank God, I can sit and I can stand without the aid of a furniture warehouse. What man but a philosopher would not be ashamed to see his furniture packed in a cart and going up country exposed to the light of heaven and the eyes of men, a beggarly account of empty boxes? That is Spaulding's furniture. I could never tell from inspecting such a load whether it belonged to a so called rich man or a poor one; the owner always seemed povery-stricken. Indeed, the more you have of such things the poorer you are. Each load looks as if it contained the contents of a dozen shanties; and if one shanty is poor, this is a dozen times as poor. Pray, for what do we move ever but to get rid of our furniture, our exuviae;[1] at last to go from this world to another newly furnished, and leave this to be burned? It is the same as if all these traps were buckled to a man's belt, and he could not move over the rough country where our lines are cast without dragging them,--dragging his trap. He was a lucky fox that left his tail in the trap. The muskrat will gnaw his third leg off to be free. No wonder man has lost his elasticity. How often he is at a dead set! 'Sir, if I may be so bold, what do you mean by a dead set?' If you are a seer, whenever you meet a man you will see all that he owns, ay, and much that he pretends to disown, behind him, even to his kitchen furniture and all the trumpery which he saves and will not burn, and he will appear to be harnessed to it and making what headway he can. I think that the man is a dead set who has got through a knot hole or gateway where his sledge load of furniture cannot follow him. I cannot but feel compassion when I hear some trig, compact-looking man, seemingly free,

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[1]Things cast off.

all girded and ready, speak of his "furniture," as whether it is insured or not. "But what shall I do with my furniture?" My gay butterfly is entangled in a spider's web then. Even those who seem for a long while not to have any, if you inquire more narrowly you will find have some stored in somebody's barn. I look upon England to-day as an old gentleman who is travelling with a great deal of baggage, trumpery which has accumulated from long housekeeping, which he has not the courage to burn; great trunk, little trunk, bandbox and bundle. Throw away the first three at least. It would surpass the powers of a well man nowadays to take up his bed and walk, and I should certainly advise a sick one to lay down his bed and run. When I have met an immigrant tottering under a bundle which contained his all--looking like an enormous wen which had grown out of the nape of his neck--I have pitied him, not because that was his all, but becauseh he had all that to carry. If I have got to drag my trap, I will take care that it be a light one and to not nip me in a vital part. But perchance it would be wisest never to put one's pay into it.

I would observe, by the way, that it costs me nothing for curtains, for I have no gazers to shut out but the sun and moon, and I am willing that they should look in. The moon will not sour milk nor taint meat of mine, nor will the sun injure my furniture or fade my carpet, and if he is sometimes too warm a friend, I find it still better economy to retreat behind some curtain which nature has provided than to add a single item to the details of housekeeping. A lady once offered me a mat, but as I had not room to spare within the house, nor time to spare within or without to shake it, I declined it, preferring to wipe my feet on the sod before my door. It is best to avoid the beginnings of evil.

Not long since I was present at the auction of a deacon's effects, for his life had not been ineffectual:--

"The evil that men do lives after them."[2]

As usual, a great proportion was a trumpery which had begun to accumulate in his father's day. Among the rest was a dried tapeworm. And now, after lying half a century in his garret and other dust holes, these things were not burned; instead of a bonfire, or purifying destruction of them, there was an auction, or increasing of them. The neighbors eagerly collected to view them, bought them all, and carefully transported them to their garrets and dust holes, to

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[2]From Antony's speech after the death of Caesar in Shakespeare's Julius Caesar.

lie there till their estates are settled, when they will start again. When a man dies he kicks the dust.

The customs of some savage nations might, perchance, be profitably imitated by us, for they at least go through the semblance of casting their slough annually; they have the idea of the thing, whether they have the reality or not. Would it not be well if we were to celebrate such a "busk," or "feast of first fruits," as Bartram[3] describes to have been the custom of the Mucclasse Indians? "When a town celebrates the busk," says he, "having previously provided themselves with new clothes, new pots, pans, and other household utensils and furniture, they collect all their worn out clothes and other despicable things, sweep and cleanse their houses, squares, and the whole town, of their filth, which with all the remaining grain and other old provisions they cast together into one common heap, and consume it with fire. After having taken medicine, and fasted for three days, all the fire in the town is extinguished. During this fast they abstain from the gratification of every appetite and passion whatever. A general amnesty is proclained, all malefactors may return to their town.--

"On the fourth morning, the high priest, by rubbing dry wood together, produces new fire in the public square, from whence every habitation in the town is supplied with the new and pure flame."

They then feast on the new corn and fruits and dance and sing for three days, "and the four following days they receive visits and rejoice with their friends from neighboring towns who have in like manner purified and prepared themselves."

The Mexicans also practised a similar purification at the end of every fifty-two years, in the belief that it was time for the world to come to an end.

I have scarcely heard of a truer sacrament, that is, as the dictionary defines it, "outward and visible sign of an inward and spiritual grace," than this, and I have no doubt that they were originally inspired directly from Heaven to do thus, though they have no biblical record of the revelation.

For more than five years I maintained myself thus solely by the labor of my hands, and I found, that by working about

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[3]William Bartram (1739-1823), an early American botanist.

six weeks in a year, I could meet all the expenses of living. The whole of my winters, as well as most of my summers, I had free and clear for study. I have thoroughly tried school-keeping, and found that my expenses were in proportion, or rather out of proportion, to my income, for I was obliged to dress and train, not to say think and believe, accordingly, and I lost my time into the bargain. As I did not teach for the good of my fellow-men, but simply for a livelihood, this was a failure. I have tried trade; but I found that it would take ten years to get under way in that, and that then I should probably be on my way to the devil. I was actually afraid that I might by that time be doing what is called a good business. When formerly I was looking about to see what I could do for a living, some sad experience in conforming to the wishes of friends being fresh in my mind to tax my ingenuity, I thought often and seriously of picking huckleberries; that surely I could do, and its small profits might suffice,--for my greatest skill has been to want but little,--so little capital it required, so little distraction from my wonted moods, I foolishly thought. While my acquaintances went unhesitatingly into trade or the professions, I contemplated this occupation as most like theirs, ranging the hills all summer to pick the berries which came in my way, and thereafter carelessly dispose of them; so, to keep the flocks of Admetus.[4] I also dreamed that I might gather the wild herbs, or carry evergreens to such villagers as loved to be reminded of the woods, even to the city, by hay-cart loads. But I have since learned that trade curses every thing it handles; and though you trade in messages from heaven, the whole curse of trade attaches to the business.

As I preferred some things to others, and especially valued my freedom, as I could fare hard and yet succeed well, I did not wish to spend my time in earning rich carpets or other fine furniture, or delicate cookery, or a house in the Grecian or the Gothic[5] style just yet. If there are any to whom it is no interruption to acquire these things, and who know how to use them when acquired, I relinquish to them the pursuit. Some are "industrious," and appear to love labor for its own sake, or perhaps because it keeps them out of worse mischief; to such I have at present nothing to

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[4]In Greek mythology, the kind of Pherae; the god Apollo was forced to serve as his serf. Figuratively, the myth serves as an allegory of the artist who is subjugated by society.

[5]A style of architecture popular in Europe in the thirteenth and fourteenth centuries.

say. Those who would not know what to do with more leisure than they now enjoy, I might advise to work twice as hard as they do,--work till they pay for themselves, and get their free papers. For myself I found that the occupation of a day-laborer was the most independent of any, especially as it required only thirty or forty days in a year to support one. The laborer's day ends with the going down of the sun, and he is then free to devote himself to his chosen pursuit, independent of his labor; but his employer, who speculates from month to month, has no respite from one end of the year to the other.

In short, I am convinced, both by faith and experience, that to maintain one's self on this earth is not a hardship but a pasttime, if we will live simply and wisely; as the pursuits of the simplier nations are still the sports of the more artificial. It is not necessary that a man should earn his living by the sweat of his brow, unless he sweats easier than I do.

One young man of my acquaintance, who has inherited some acres, told me that he thought he should live as I did, if he had the means. I would not have any one adopt my mode of living on any account; for, beside that before he has fairly learned it I may have found out another for myself, I desire that there may be as many different persons in the world as possible; but I would have each one be very careful to find out and pursue his own way, and not his father's or his mother's or his neighbor's instead. The youth may build or plant or sail, only let him not be hindered from doing that which he tells me he would like to do. It is by a mathematical point only that we are wise, as the sailor or the fugitive slave keeps the polestar in his eye; but that is sufficient guidance for all our life. We may not arrive at our port within a calculable period, but we would preserve the true course.

Undoubtedly, in this case, what is true for one is truer still for a thousand, as a large house is not proportionally more expensive than a small one, since one roof may cover, one cellar underlie, and one wall separate several apartments. But for my part, I preferred the solitary dwelling. Moreover, it will commonly be cheaper to build the whole yourself than to convince another of the advantage of the common wall; and when you have done this, the common partition, to be much cheaper, must be a thin one, and that other may prove a bad neighbor, and also not keep his side in repair. The only cooperation which is commonly possible is exceedingly partial and superficial; and what little true cooperation there is, is as if it were not, being a harmony inaudible to men. If a man has faith he will cooperate with equal faith every where; if he has not faith, he will continue to live like the rest of the world, whatever company he is joined to. To cooperate, in the

highest as well as the lowest sense, means to get our living together. I heard it proposed lately that two young men should travel together over the world, the one without money, earning his means as he went, before the mast and behind the plough, the other carrying a bill of exchange in his pocket. It was easy to see that they could not long be companions or cooperate, since one would not operate at all. They would part at the first interesting crisis in their adventures. Above all, as I have implied, the man who goes alone can start to-day; but he who travels with another must wait till that other is ready, and it may be a long time before they get off.

APPENDIX E

OBJECTIVES FOR THE WALDEN ESSAY

(Vague verbs - vague objects)

INSTRUCTIONS

This is an exercise to determine your ability to read and understand a few pages of college level material. Keep the objectives in mind as you read the assignment. You will use this material later for class discussion and possibly as an essay topic.

It's OK to take notes on this page and/or write on the reading material itself. When you are through reading and have reviewed the objectives, put this page and the reading material in the envelope, bring it to the desk, and pick up a test.

Objectives - After reading these pages, you should:

1. Understand Thoreau's views.

2. Know the important facts.

(vague verbs - specific objects)

INSTRUCTIONS

This is an exercise to determine your ability to read and understand a few pages of college level material. Keep the objectives in mind as you read the assignment. You will use this material later for class discussion and possibly as an essay topic.

It's OK to take notes on this page and/or write on the reading material itself. When you are through reading and have reviewed the objectives, put this page and the reading material in the envelope, bring it to the desk, and pick up a test.

Objectives - After reading these pages, you should:

1. Understand Thoreau's metaphor, "We may not arrive at our port within a calculable period, but we would preserve the true course."

2. Understand Thoreau's metaphor, "my gay butterfly is entangled in a spider's web then."

3. Know the method of work Thoreau preferred.

4. Understand Thoreau's attiude toward cooperation with our fellow man.

5. Know Thoreau's attitudes toward owning furniture.

(specific verbs - vague objects)

INSTRUCTIONS

This is an exercise to determine your ability to read and understand a few pages of college level material. Keep the objectives in mind as you read the assignment. You will use this material later for class discussion and possibly as an essay topic.

It's OK to take notes on this page and/or write on the reading material itself. When you are through reading and have reviewed the objectives, put this page and the reading material in the envelope, bring it to the desk, and pick up a test.

Objectives - After reading these pages, you should be able to perform the following tasks:

1. Given groups of four statements, choose the one from each group that best explains Thoreau's view or identifies a fact from the essay.

2. Given several statements, determine which ones are true with regard to Thoreau's views or facts from the essay.

(specific verbs - specific objects)

INSTRUCTIONS

This is an exercise to determine your ability to read and understand a few pages of college level material. Keep the objectives in mind as you read the assignment. You will use this material later for class discussion and possibly as an essay topic.

It's OK to take notes on this page and/or write on the reading material itself. When you are through reading and have reviewed the objectives, put this page and the reading material in the envelope, bring it to the desk, and pick up a test.

Objectives - After reading these pages, you should be able to perform the following tasks:

1. Given four statements, choose the one that best explains Thoreau's metaphor, "We may not arrive at our port within a calculable period, but we would preserve the true course."

2. Given four statements, choose the one that best explains Thoreau's metaphor, "My gay butterfly is entangled in a spider's web then."

3. Given four statements, choose the one that identifies the method of work Thoreau preferred.

4. Given a statement, determine if it is true or false with regard to the method of work Thoreau preferred.

5. Given four statements, choose the one that identifies Thoreau's attitude toward cooperation with our fellow man.

6. Given a statement, determine if it is true or false regarding Thoreau's attitude toward our fellow man.

7. Given four statements, choose the one that identifies Thoreau's attitude toward owning furniture.

8. Given a statement, determine if it is true or false regarding Thoreau's attitude toward owning furniture.

Test on Selection from Walden

Directions: Record your answers on the answer sheet by blackening in the appropriate space with a #2 pencil. Please don't write on the test.

Multiple Choice

1. Thoreau feels his greatest skill has been
   A. to be able to pick huckleberries.
   B. to build his own house.
   C. to want but little.
   D. to earn his living by the sweat of his brow.

2. Thoreau says cooperation with our fellow man is
   A. definitely the best way to live.
   B. usually just partial and superficial.
   C. far superior to competition and arguing.
   D. difficult to achieve but well worth the effort.

3. When Thoreau says, "We may not arrive at our port within a calculable period, but we would preserve the true course," what does he mean?
   A. We may not get where we want to go, but we should still do things the right way.
   B. The most important thing is to live our life the way we want to, even though we might not accomplish our goals.
   C. If we want to be successful in life, we need to live according to certain rules.
   D. If we sail in the right direction, we'll have a good chance of reaching our goals.

4. When Thoreau says, "My gay butterfuly is entangled in a spider's web" then, he is referring to a man who
   A. is worried about how to make a living.
   B. wants to live like Thoreau but hasn't the means.
   C. is worried about what to do with his furniture.
   D. wants to cooperate with another man in building a house.

5. Which of the following ways of earning a living did Thoreau feel gave him the most independence?
   A. School keeping
   B. Doing day labor
   C. Picking huckleberries
   D. Writing books

APPENDIX F

TEST ON THE WALDEN ESSAY

6. What two examples does Thoreau give of people who periodically (once every so many months or years) burned their worn out clothes and other possessions?
   A. An Indian tribe and the Mexicans
   B. Philosophers and school keepers
   C. Deacons and school keepers
   D. An Indian tribe and day-laborers

7. When a young man says he would live like Thoreau if he had the means, Thoreau says
   A. the man should copy his way of living even if he doesn't have the means.
   B. people should first earn some money, and then live like he does.
   C. if the young man didn't have so much furniture, he could afford to live the right way.
   D. each person would live his own way rather than copy someone else's way.

8. Complete the following statement by Thoreau: "It was not necessary that a man should earn his living by the sweat of his brow,"
   A. because work is basically a waste of one's time.
   B. but he should do this if his day ends with the going down of the sun.
   C. unless he wants to pursue his own way of life.
   D. unless he sweats easier than I do.

9. How long did Thoreau find he needed to work to meet all the expenses of living?
   A. One week
   B. One month
   C. Six weeks
   D. Six months

10. Thoreau feels furniture is like a
   A. trap.
   B. fox.
   C. pumpkin.
   D. paw.

11. With regard to owning furniture, Thoreau believed that
   A. many people have too much.
   B. the more you have, the poorer you are.
   C. both of the above answers.
   D. neither of the above answers.

12. Which of the following statements best summarizes Thoreau's attitude toward how hard a person should work?
   A. Hard work never hurt anyone.
   B. Whatever work you choose to do, work hard at it by doing the best you can.
   C. It's better to be an employer than an employee,

because you won't have to work as hard.
D. You don't have to work hard to support yourself.

13. The item used in this selection to mean "feast of first fruits" is
A. wen
B. busk
C. spaulding
D. trumpery

14. Which of the following items was NOT in Thoreau's house?
A. lamp
B. curtains
C. desk
D. looking glass

15. When Thoreau says the little true cooperation that exists is "a harmony inaudible to men," he means true cooperation
A. is like listening to a good concert.
B. is not noticed by other people.
C. sounds good but really isn't.
D. sounds good only to those who understand it.

16. What did Thoreau feel should have been done with the possessions of the deacon when he died?
A. Give it away.
B. Sell it.
C. Burn it.
D. None of the above.

17. In one paragraph Thoreau quotes William Bartram, who was an early American
A. expert on Mexico.
B. furniture expert.
C. minister.
D. botanist.

True - False (On your answer sheet, use "a" for TRUE and "b" for FALSE.)

18. Thoreau believed we would be better off sitting on pumpkins instead of wasting money buying chairs.

19. Thoreau decided against picking huckleberries for a living because it was too exhausting.

20. Thoreau felt sorry for immigrants carrying all their possessions because it showed how little they owned.

21. Thoreau would probably be against the saying, "do your own thing."

22. If Thoreau were alive today, he would probably criticize people who like to buy things at flea markets and garage sales.

23. According to Thoreau, one advantage of traveling with someone is that you can help each other when the problems arise.

24. Thoreau didn't want to be an employer, because he felt employers get no rest.

25. Thoreau was critical of doing day labor because it made him work too hard for what it was worth.

NOTE: (Incidental questions are: 1, 6, 7, 8, 9, 12, 13, 14, 17, and 21.)

APPENDIX G

CELL SIZES, MEANS, AND STANDARD DEVIATIONS FOR THE WOMEN'S LIB TESTS

TABLE G.1

CELL SIZES, MEANS, AND STANDARD DEVIATIONS FOR THE WOMEN's LIB TESTS

Independent Variables			Dependent Variables								
			Immediate					Retention			
				Intentional		Incidental		Intentional		Incidental	
Reading Ability	Specificity of Verb	Specificity of Object	n	$\bar{x}$	S.D.	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	$\bar{x}$	S.D.
High	Vague	Vague	13	12.38	2.22	7.77	1.54	11	11.45	2.73	7.73	1.56
		Specific	11	12.00	1.73	7.45	1.21	11	11.27	1.90	7.00	1.61
	Specific	Vague	9	12.00	1.41	8.22	.83	7	12.00	1.00	7.71	.95
		Specific	12	12.83	1.45	8.17	1.03	11	12.27	1.42	7.64	1.29
Medium	Vague	Vague	15	12.53	1.77	7.33	1.40	15	11.93	1.44	7.27	2.91
		Specific	15	12.87	2.10	7.53	2.07	13	12.00	2.16	7.38	1.94
	Specific	Vague	17	12.47	2.18	7.12	1.41	16	11.56	2.42	7.12	1.40
		Specific	17	11.94	1.75	7.24	1.71	14	10.92	1.82	7.43	.94
Low	Vague	Vague	15	10.80	2.24	7.13	1.46	11	10.27	1.90	6.45	2.30
		Specific	12	11.25	1.54	6.67	1.67	10	11.50	1.72	7.00	1.41
	Specific	Vague	13	11.15	2.34	6.92	1.66	10	10.20	2.35	6.80	.79
		Specific	16	10.31	2.52	6.25	2.02	16	10.25	2.38	16.06	1.83
		Total N's	165					145				

APPENDIX H

CELL SIZES, MEANS, AND STANDARD DEVIATIONS FOR THE WALDEN TESTS

TABLE H.1

CELL SIZES, MEANS, AND STANDARD DEVIATIONS FOR THE WALDEN TESTS

Independent Variables			Dependent Variables								
			Immediate					Retention			
				Intentional		Incidental			Intentional		Incidental	
Reading Ability	Specificity of Verb	Specificity of Object	n	$\bar{x}$	S.D.	$\bar{x}$	S.D.	n	$\bar{x}$	S.D.	$\bar{x}$	S.D.
High	Vague	Vague	12	10.67	1.83	8.58	1.44	7	9.43	2.34	9.00	.82
		Specific	9	11.11	2.42	8.00	1.80	7	9.29	2.14	8.00	.82
	Specific	Vague	10	9.50	1.27	8.30	.95	10	8.50	2.32	8.20	1.85
		Specific	10	11.20	1.32	8.50	1.08	7	11.00	1.83	7.42	1.51
Medium	Vague	Vague	14	9.64	2.13	8.07	1.64	14	8.71	2.87	8.00	1.52
		Specific	13	10.07	2.78	7.92	1.98	13	9.38	2.90	7.92	2.14
	Specific	Vague	13	9,76	2.89	7.85	1.07	12	10.08	3.15	8.41	1.16
		Specific	14	10.64	2.90	8.00	1.92	12	9.42	2.87	8.00	1.35
Low	Vague	Vague	13	8.23	2.05	7.69	.85	9	7.33	2.00	6.78	1.20
		Specific	11	8.45	2.11	6.45	2.16	7	9.00	2.08	7.00	1.15
	Specific	Vague	13	7.23	2.00	7.85	1.52	11	6.64	2.29	6.54	2.62
		Specific	13	9.15	1.95	7.38	2.22	11	8.36	3.07	7.63	1.86
		Total N's	145					120				

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