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Advance Organizers and Web Based Instruction:
Effects on Pre-service Teachers' Achievement and Attitudes

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In partial fulfillment of the requirements for

Dr. White

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INTRODUCTION

Distance learning is a fast growing instructional method used by public and private institutions worldwide to reach large audiences across both temporal and local boundaries. The defining characteristics of distance learning are the separation of teacher and learner by time and/or space. Since its birth in the mid-nineteenth century, distance learning has steadily grown parallel to, and partially as a result of, developments in communications media and technology.

Distance learning in its earliest incarnation took the form of letter correspondence. Radio before, and later broadcast television and video during and after the Second World War led to great strides in the methodology of, and accessibility to distance learning. With the advent of **the Internet** and later the **World Wide Web** in the late twentieth century along with their rapid growth and accessibility, **Web-Based Instruction** in the twenty first century has become distance learning's newest development. Through the World Wide Web, large populations of learners can be reached with less concern for time and location than ever before. This provides excellent opportunities for career enhancement and continuing education for adult professionals.

Because of its universal availability and dynamic nature, interest in the World Wide Web has grown rapidly in all facets of instruction in the military, industry and

school system. Due to the recent explosion of interest in Web-Based Instruction in education, researchers and practitioners are scrambling to find proven methods for turning Web sites into effective learning instruments.

Much needed research must now be done on how to most efficiently use the abundance of learning material being created for the World Wide Web in day-to-day curricula. More specifically, the resources created for **the Web** need to be made accessible and practical to use for those who will be depending on them for professional enhancement. For the purpose of this study, **Web-based Learning** will be defined as learning that takes place during or as a direct result of Web Based Instruction.

Web-Based Instruction is “any purposeful, considered application of Web technologies to the task of educating...”(Horton, 2000, p.2). The term **Web-Based Training** is often used in industrial contexts while Web Based Instruction and **Web-based Education** have been used interchangeably in university settings. Web-Based Instruction (WBI) will be used throughout this paper as is fitting for the context within which it will be discussed.

Internet users observe a number of different **protocols** or formats for transferring data. One of these formats is called **Hypertext Transfer Protocol** or HTTP. The acronym HTTP is the first component of a Web address or **Universal Resource Locator** (URL.) One example of a URL is: <http://www.usf.edu/>. The formatting language created to allow for the transfer of data in HTTP is called **Hypertext Markup Language** or

HTML. HTML is used to tell browsers where to find information and how to display it on a computer screen. The **World Wide Web** is a system of computers called servers that support special documents formatted (using HTML) to **link** to other documents as well as graphics and other media files. **Hypertext** refers to a special type of database system in which different objects (text, graphics, audio files, video files, etc.) can be linked to each other. HTML is its most famous manifestation. Because hypertext documents today contain a variety of different media, it is more appropriate to refer to them as **hypermedia**.

Hypermedia is what makes the World Wide Web a “Web” of information. Documents created with hypermedia create connections between other documents and media files in a potentially infinite array of interconnected sources of information that stretch beyond traditional boundaries of time and space.

Through the World Wide Web, large populations of learners can be reached with less concern for time and location than ever before. This provides excellent opportunities for career enhancement and continuing education for adult professionals as well as a rich context for teaching in more traditional academic settings. High current demands for Web-based education and training create urgency for research on the efficacy of Web material for instruction.

RATIONALE

High current demands for Web-based education and training create urgency for research on the efficacy of Web material for instruction. A major challenge for teachers and instructional designers is to learn how to make effective use of hypermedia in order to assist people to learn while avoiding certain inherent problems.

A major cognitive issue concerning Web Based Learning is **learner disorientation**. Navigation is a commonly identified user problem in hypermedia, and cause for learner disorientation (Kenny, 1993). Hypermedia can offer an infinite number of non-linear paths to follow in pursuit of information. Whereas it can provide flexibility and a learner-centered locus of control, hypermedia can cause learners to lose their sense of location or of the structure of the material they are trying to process (Kenny, 1993). Any Web site, for example is composed of a number of hyperlinks that lead to other parts of the site or to locations outside of the site. The larger the number of links, the easier it is for the learner to either become lost or so involved in navigating the site, that they lose their grasp of the material being presented. Some learners may even give up in frustration. This leads to a second related issue concerning Web-based learning.

Jonassen (1989) notes that the exponentially great number of learning options available to learners (especially in hyper-environments) places increased demands on them that they are ultimately unable to fill. **Cognitive overload** occurs when learner disorientation leads to high expenditure of mental effort to maintain a sense of orientation in the program that in turn reduces the mental resources available for learning. This effect

can be magnified when the to-be-learned content is unfamiliar to the learner. The presentation of unfamiliar instructional content compounded with complicated structural formats of that content, such as hypermedia, can contribute to learner disorientation and hence cognitive overload. “In order to facilitate navigation in hypertext environments, information about the structure of the data base should be provided. Traditionally, a device for orienting students to content has been the advance organizer (Tripp & Roby 1990, p. 121).” It is this idea that drives the current investigation.

By providing a link between unfamiliar new information presented to learners and knowledge structures they already have in place, instructional organizers can both have a facilitative effect on the learning process and the potential to alleviate some amount of cognitive stress. Unfamiliar instructional content and/or complicated formats such as hypermedia can be made more accessible to learners by showing them preview material that relates to content and formats with which the learners are already familiar. This way, not only does a learner have more cognitive power available to learn new material, but the learning experience also becomes personalized and meaningful.

In his *Subsumption Theory*, David Ausubel suggests that learners subsume new data under general more inclusive concepts and principles. For new learning to take place, learners must possess the requisite superordinate ideas. That is, in order to learn new material, learners must possess the mental scaffolding with which to store the new information (Ausubel, 1960). Ausubel’s theory is generally consistent with recent schema theory. That is, new information can be learned and retained to the extent that it can be

related to an existing cognitive structure (Clark & Bean, 1980). For example, single facts are difficult to learn out of context or when unfamiliar to the learner. By attaching new knowledge to already existing conceptual structures, a fact is understood and internalized. Similarly, content that is unfamiliar, or organized in an unfamiliar fashion will be learned poorly unless the individual is provided with or develops concepts or organizing principles that aid the acquisition process (Clark & Bean, 1980). **Advance organizers** are the practical extension of Ausubel's theoretical base mentioned above.

An advance organizer, as described by David P. Ausubel, is "introductory material at a higher level of abstraction, generality, and inclusiveness than the learning passage itself" (Ausubel, 1978, p. 252). This concept is differentiated from an overview. Ausubel states, "Advance organizers also differ from overviews in being relatable to presumed ideational content in the learner's current cognitive structure" (Ausubel, 1978, p. 252). This means that the content of an advance organizer will make links to constructs already familiar to the learner, whereas an overview need not necessarily make this link.

The purpose of an advance organizer is to provide learners with context rather than content and conceptual scaffolding rather than specific detail from a body of to-be-learned information. In an American classroom, for example, an advance organizer presented before a lesson on the German school system could describe the American school system, pointing out similarities and differences between the American and German organizational structures.

Ausubel categorizes advance organizers as expository or comparative. *Expository* organizers are used when the new learning material is completely unfamiliar. They are intended to “provide inclusive subsumers that are both related to existing ideas in cognitive structure and more detailed material in the learning passage.” (Ausubel, 1978, p.252). *Comparative* advance organizers are used when the learning material is somewhat familiar. “In this case, the aim is not only to provide ideational scaffolding for the specifics of the learning passage, but also to increase discriminability between new ideas and old ideas by pointing out explicitly the principle similarities and differences between them.” (Ausubel, 1978, p. 253).

In a 1960 study 110 college students read a 2500-word text on metallurgy after reading a 500 word expository organizer that represented underlying concepts for the information or a 500 word historical passage. The expository advance organizer group performed better than the group reading the historical passage (EAO = 47% correct, HIST = 40% correct). The study investigated the hypothesis that “learning and retention of unfamiliar but meaningful verbal material could be facilitated by advance introduction of relevant subsuming concepts” (Ausubel, 1960, p. 271).

In a comparison study of comparative and expository advance organizers and historical introductions as introductory passages to a text on Buddhism conducted by Ausubel and colleagues, the *expository* advance organizer presented principle Buddhist doctrines at a higher level of abstraction, generality, and inclusiveness, without making

reference to Christianity (Ausubel & Fitzgerald, 1961). In the same study mentioned above, the *comparative* advance organizers pointed out explicitly the differences and similarities between Buddhism and material that was already familiar to the learner, Christianity (Ausubel & Fitzgerald, 1961).

A common problem with advance organizer development and research involves an operational definition of advance organizers. McEneaney (1990) has pointed out that in order to evaluate a given theoretical position, one needs to rely on empirical research that uses material and procedures which are based on, and also consistent with the theory in question. He further implied that inconsistent or vague definitions can lead to poor research results. Clark & Bean (1980) suggested similarly that indecisive results on the effects of advance organizers could be attributed to researchers' inconsistencies in the definition and construction of advance organizers. They suggested that Ausubel's definition of advance organizers is logical rather than operational, making it difficult to construct and measure their effectiveness. Barnes and Clawson also claimed that Ausubel had not operationally defined advance organizers. They further recommended that future studies on advance organizers should be based on operationally defined advance organizers (Barnes & Clawson, 1975).

Richard Mayer operationalized Ausubel's logical definition of advance organizers by proposing the following five characteristics for their construction (Mayer, 1979a):

1. Advance organizers must be composed of a short set of verbal or visual information.
2. Advance organizers must be presented prior to learning a larger body of information.
3. Advance organizers must contain no specific content from to-be-learned information
4. Advance organizers must provide a means of generating the logical relationships among the elements of to-be-learned information
5. Advance organizers must influence the learners' encoding process.

For the sake of this study, the author will consider an expository advance organizer as defined by Ausubel and use characteristics for the construction of an advance organizer as put forward by Mayer. An expository advance organizer is operationally defined below:

1. The Advance organizer will be composed of a short set of verbal, or verbal and visual information.
2. It will be presented prior to a large body of information.
3. It will contain no specific content from that body.
4. It will call forth or help the student create general organizational patterns and relationships within the to-be-learned material.
5. It will help the student build a cognitive construct on which to place new information from the to-be-learned material.

6. Finally, it will influence the learner's verbal and visual encoding processes through the contiguous presentation of verbal and visual information.

There is some evidence that advance organizers have a facilitative effect on learning especially for lower ability students, beginners, or those generally unfamiliar with the to-be-learned material (Ausubel, 1963; Ausubel 1978; Chun & Plass, 1996; Hartley & Davies 1976; Luiten, Ames & Ackerson, 1980; Mayer, 1979; Kenny 1993). Combining contiguous verbal and visual cues in instructional material has also proven to be beneficial to learners (Chun & Plass, 1996; Kiewra et al. 1997; Mayer, 1997; Plass, Chun, Mayer, Leutner, 1998; Ritchie & Gimenez, 1996; Robinson & Kiewra, 1995; Robinson et al. 1998). Advances in digital technology in the last decade have led to the ability to develop multimedia more conveniently and at higher levels of sophistication than ever before. These advantages impact the field of education due to the richness of context which multimedia can provide and the variety of presentation forms multimedia instructional material can assume (i.e. text, graphics, animation.)

To date, the author has found no published research that has investigated the effect an expository advance organizer could have on learning from Web-based material. Furthermore, no research has been found that has investigated the effects multimedia advance organizers have on learning from Web-based material. This experiment will combine established cognitive theories of learning and multimedia into a framework for the development and evaluation of an instructional aid for Web-based instruction.

PURPOSE

In response to an apparent need and legislative mandate for Florida public school instruction on the history of the Holocaust, graduate students and staff at a major university created a Web-Based Instructional program for Holocaust education. The material contained within the site is distant both in time, location, and philosophy for many of the preservice teachers at universities in the United States. A large percentage of these teachers-in-training were born long after the Second World War, and many of them know little about the events that led up to and transpired during the Holocaust. The aforementioned unfamiliarity with the site's content compounded with its format (hypermedia) creates potential for learner disorientation and cognitive overload.

This study will investigate the effect that the presentation of an advance organizer before a Web-based history activity has on preservice teachers' learning of information about the Holocaust. The study will also examine the effects of the advance organizer and Web based history activity on students' attitudes towards traditionally marginalized groups in the United States. The independent variable advance organizers will be divided into two levels, written advance organizers and multimedia advance organizers.

STATEMENT OF THE HYPOTHESES

1. It is hypothesized that preservice teachers who are exposed to a text-based advance organizer before working on a Web-Based Instructional activity will perform better than those who do not.

2. It is hypothesized that preservice teachers who are exposed to a text-based advance organizer before working with a Web-Based Instructional program will perform better on an posttest measure than those who do not.

3. It is hypothesized that preservice teachers who are exposed to a text-based advance organizer before working with a Web-Based Instructional program will demonstrate greater change in attitude about traditionally marginalized groups in American society than those who do not.

4. It is hypothesized that preservice teachers who are exposed to a multimedia advance organizer before working on a Web-Based Instructional activity will perform better than those who do not.

5. It is hypothesized that preservice teachers who are exposed to a multimedia advance organizer before working with a Web-Based Instructional program will perform better on an posttest measure than those who do not.

6. It is hypothesized that preservice teachers who are exposed to a multimedia advance organizer before working with a Web-Based Instructional program will demonstrate greater change in attitude about traditionally marginalized groups in American society than those who do not.

7. It is hypothesized that preservice teachers learning scores will exhibit positive correlation with posttest scores, after pretest correlation.

LITERATURE REVIEW

Overview

The review of the literature will be organized into the following sections: *Advance Organizer Research and Development, Multimedia and Learning, Multimedia Advance organizers, Video Advance organizers, A Web-based Teachers' Guide.*

Advance Organizer Research and Development

Analyses of the effectiveness of advance organizers on learning have produced conflicting results. A number of critics have claimed that there is no real proof of advance organizers facilitating learning, and furthermore that a clear definition of advance organizers does not exist (Barnes & Clawson, 1975; Clark & Bean 1980; Kenny, 1993).

Barnes and Clawson (1975) reviewed 32 studies using the "voting technique." They assigned studies to groups of statistically significant and non-significant results. The nonsignificant group was larger. Barnes and Clawson concluded that advance organizer efficacy was not supported. One problem with the voting technique, however, is that it does not consider positive statistically nonsignificant results. Nonsignificant results whether positive or negative are grouped with those showing statistically significant and nonsignificant negative results. The voting method, therefore, is more likely to produce negative findings.

Clark & Bean (1980) suggested that indecisive results on the effects of advance organizers could be attributed to researchers' inconsistencies in the definition and construction of advance organizers. They suggest that Ausubel's definition of advance organizers is logical rather than operational, making it difficult to construct and measure their effectiveness. Similarly, McEneaney (1990) points out that in order to evaluate a given theoretical position, one needs to rely on empirical research that uses material and procedures which are based on, and also consistent with the theory in question.

McEneaney (1990) conducted a study in which he reviewed four studies done on advance organizers written in some part by David Ausubel himself (1960-1963). The study was conducted as a result of Clark and Bean's suggestions above. In this way, one could be relatively confident that the study would be consistent with the theory.

McEneaney reported no consistent evidence across four studies (Ausubel, 1960, Ausubel & Fitzgerald, 1961; Ausubel & Fitzgerald, 1962; Ausubel & Youssef, 1963) in support of the efficacy of advance organizers. He points out, as do Clark and Bean (1982), that there is no sound operational definition of an advance organizer that researchers, including Ausubel, follow. Barnes and Clawson also claimed that Ausubel had not operationally defined advance organizers. They further recommended that future studies on advance organizers should be based on operationally defined advance organizers (Barnes & Clawson, 1975).

Richard Mayer has since defended the positive effect advance organizers have on meaningful learning (Mayer, 1979). Mayer's *Assimilation Encoding Theory* predicts that advance organizers facilitate the transfer of anchoring knowledge to working memory as

well as active integration of this knowledge to information being received. Mayer's theory also predicts that advance organizers may have no effect on learning if the advance organizer does not encourage the learner to actively integrate new information (Mayer, 1979a).

Partially as a response to claims that Advance organizer research is weak due to vague definition, Richard Mayer proposed the following characteristics for constructing advance organizers (Mayer, 1979a):

1. Advance organizers must be composed of a short set of verbal or visual information.
2. Advance organizers must be presented prior to learning a larger body of information.
3. Advance organizers must contain no specific content from to-be-learned information
4. Advance organizers must provide a means of generating the logical relationships among the elements of to-be-learned information
5. Advance organizers must influence the learners' encoding process.

Mayer reviewed advance organizers literature using twenty-seven published studies containing an advance organizer group and a control group according to three questions:

1. Is the material, unfamiliar, technical or lacking a basic assimilative context?
2. Is the advance organizer likely to serve as an assimilative context?
3. Does the advance organizer perform better than the control group on a test?

He found that there was a small but consistent advantage for the advance organizers group refuting Barnes and Clawson's claim that there is no evidence for the effects of advance organizers (Mayer, 1979b).

Luiten, Ames and Ackerson (1980) also reported a "small but facilitative effect on learning and retention" of advance organizers in a meta-analysis of 135 advance organizer studies (p. 217) (see TABLE 1 below).

TABLE 1

Mean and Standard Error of Effect Size for Advance organizers on Learning and Retention

	Learning		Retention			
	0-1 day	2-6 days	7 days	8-20 days	21 days	22+ days
# of effect sizes	110	8	17	8	9	8
Mean	.21	.19	.20	.23	.30	.38
Standard error	.04	.15	.10	.16	.11	.16

(Luiten, Ames & Ackerson, 1980, p. 213)

Luiten et. al. also found that the mean effect size for aural mode advance organizers was twice that of written mode advance organizers (see TABLE 2 below).

TABLE 2

Mean and Standard Error of Effect Size for Advance organizers on Learning and Retention When Studies are Classified by Presentation Mode

	Presentation mode	
	Written	Aural
Number of effect sizes	89	21
Mean	.17	.37
Standard Error	.04	.14

(Luiten, Ames & Ackerson, 1980, p. 216)

In a 1983 meta-analysis of 29 studies, Carol Stone reported a facilitative effect for advance organizers. The Median effect size for all studies was 0.48 (mean = 0.66, DS – 0.78, N=112). Stone found, among other things, that higher effect sizes were associated with nonwritten or illustrated advance organizers and those with an expository style (see TABLES 3 and 4).

TABLE 3

Classification of Effect Size by Advance Organizer Characteristics

Variable	Levels				
Style	Comparative	Expository	Mixture	Narrative	Non-specified
Median ES	0.48	0.68	0.32	0.29	0.38
Mean ES	0.88	0.80	0.18	0.53	0.54
SD	0.93	0.76	0.42	0.85	0.64
# of studies	22	44	16	12	18
Medium	Written only	Written and illustrated	other		
Median ES	0.34	0.40	0.68		
Mean ES	0.43	0.52	0.83		
SD	0.72	0.89	0.75		
# of studies	38	15	59		

(Stone, 1983, p.196)

Ausubel's original research on advance organizers investigated the use of *textual* organizers on verbal learning. Mayer proposed that an advance organizer could be composed of a short set of *verbal or visual* information. He also stated that advance organizers must influence the learner's encoding process (Mayer, 1979a). Recent development of theories on combinations of verbal and visual presentation of learning material has opened new possibilities for educational multimedia research (Chun & Plass,

1997; Hatch & Dwyer, 1999; Herron et al. 1995; Mayer, 1997; Ruthosky & Dwyer, 1996).

Current multimedia research, suggests that different combinations of verbal and visual organizers can facilitate learning in varying degrees depending on learner styles (Chun & Plass, 1997; Hatch & Dwyer, 1999; Herron et al. 1995; Mayer, 1997; Plass, Chun, Mayer, Leutner 1998; Ruthosky & Dwyer, 1996). More specifically, multimedia advance organizers (those combining verbal and visual elements) may be more effective than advance organizers that are verbal or visual alone (Plass, Chun, Mayer, Leutner 1998). The following section will explore some interesting ideas about multimedia and learning that can be applied to advance organizer development and research.

Multimedia and Learning

The effectiveness of instructional strategies depends greatly on individual learner differences (Ritchie & Gimenez, 1996). One can safely say that there is a proven potential power in combining media forms in instructional material (Chun & Plass, 1996; Kiewra et al. 1997; Ritchie & Gimenez, 1996; Robinson & Kiewra, 1995; Robinson et al. 1998).

In his article on *Multimedia Learning*, Richard Mayer (1997) proposes a *Generative Theory of Multimedia Learning* (GMM) on which to base a series of experiments testing the effects of different forms of visual and verbal annotations on multimedia texts. He explains that his research is motivated by the idea that the design of

multimedia instructional materials should be based on a theory of meaningful learning.

He proposes that more research needs to be done on how people learn from pictures and words. That is, how people integrate verbal and visual information during multimedia learning (Mayer, 1997). Mayer's theory suggests that a learner can be viewed as a knowledge constructor who actively selects and constructs pieces of verbal and visual knowledge in unique ways.

Mayer believes that, in accordance with Wittrock's *Generative Theory* (1974), meaningful learning occurs when learners select relevant information from what is presented, organize the pieces of information into a coherent mental representation, and integrate the newly constructed representation with others (Mayer, 1997). Transfer, under the given conditions, should occur. Mayer also claims that, similar to Paivio's *Dual Coding Theory* (1971), cognitive processes take place within two separate information-processing systems: a visual system for processing visual knowledge and a verbal system for processing verbal knowledge (Mayer, 1997).

In Mayer's GMM, the learner actively connects pieces of verbal and visual knowledge. The basic idea here is that multimedia instruction affects the degree to which learners engage in the cognitive processes required for multimedia learning within the verbal and visual processing systems (Mayer, 1997). Mayer and Sims (1994) stated that one of the most important functions of instructional materials is to help students construct referential connections between two forms of mental representation: the verbal representation system and the visual representation system. These referential connections

are best made when both verbal and visual materials are presented contiguously. Mayer and Sim's conclusions agree with a body of research that shows that learning can be supported by presenting visual and verbal learning material in a specific manner (Plass, Chun, Mayer, Leutner, 1998).

Plass et al. suggest that the additive effect of dual coding - the process of integrating existing information with new information from multiple sources - can improve student recall. An example would be instruction that includes both textual and visual references containing separate but potentially complimentary coding mechanisms (1998). Designers must be aware, however, that the information presented within text and graphic must be parallel. If information represented in both text and graphic do not contain a certain level of redundancy, processing requirements may be raised, which can hinder encoding (Plass et al. 1998).

In a review of eight studies conducted by Mayer and colleagues (1997) it was found that students who received a coordinated presentation of verbal explanations in verbal and visual format, generated a median of considerably more creative solutions on problem-solving transfer tests than did students who received verbal explanations alone. Mayer's review also found considerable evidence showing the need for contiguity between the verbal and visual cues (Mayer, 1997).

Mayer's ideas fit into a constructivist paradigm for learning in which instruction must become personally relevant to the learner. The effectiveness of instructional

strategies depends greatly on individual learner differences (Ritchie & Gimenez, 1996).

One can safely say that there is a proven potential power in combining media forms in instructional material (Chun & Plass, 1996; Kiewra et al. 1997; Ritchie & Gimenez, 1996; Robinson & Kiewra, 1995; Robinson et al. 1998). In order for learning to occur, material presented to the learner needs to accommodate different learning styles. This way, the learner can better generate the necessary relationship between material being presented and their prior knowledge.

Multimedia Advance organizers

The ease and flexibility with which one can combine graphic and textual content using digital media and current research, however little, suggests that the richness of context which multimedia lends to advance organizers can facilitate their effectiveness. New research should not be done on how media alone affects learning, but on instructional methodology and theory in the modern context of multimedia (Jonassen, 1996; Mayer, 1997; Mayer & Sims, 1994).

Carol Herron conducted a study in 1994 on the effects of an advanced organizer for beginning French students on the comprehension of a video series. The instructor provided six short sentences on a chalkboard that chronologically summarized the major scenes in a ten-minute video clip that the students were about to watch. The video was then viewed with no further teacher manipulation. As compared to students who had no advance organizer preceding their viewing of the clips, Herron found that the students who had the advance organizers performed significantly better on tests throughout the course of the semester. The results from this study led to a further investigation of which

kinds of advance organizers could be more successfully combined with different forms of instructional material.

Two studies (Herron, 1982; Taglieber, Johnson & Yarborough, 1988) have compared visual advance organizers to other non-visual pre-reading activities. The first study, conducted by Hudson, found that a vocabulary pre-reading condition was less effective than a visual advance organizer at beginner and advanced reading levels. The second study by Taglieber et al. found that, while all three treatments (vocabulary pre-reading, pre-questioning, and a visual condition) facilitated comprehension, the vocabulary pre-reading condition was less effective than the visual pre-reading treatments.

In a study conducted in 1995 by Carol A. Herron, Julia B. Hanley, and Steven B. Cole with college students of French, two types of advanced organizers were tested against each other before a set of twelve instructional videos. One used a verbal description in the form of six sentences before the video; whereas, in the second condition, the teacher presented an identical verbal description accompanied by pictures. When the teacher read the six-sentence advanced organizer to her class, one of the two groups was presented pictures related to but not defining the content of the sentences.

Student performance was tested in each group (those taught with and without picture supported advanced organizers.) The results suggested that the advanced organizers using description and pictures improved students' comprehension of the

videos. The implications of Herron et al's study open a wide range of possibilities for the study of multimedia advance organizers in instruction. Few studies however, have compared the effects of video advance organizers on learning.

Video Advance organizers

Herron et al. conducted a study in 1995 in which two visual advance organizers were compared in order to determine effectiveness in reading comprehension. The two types being compared were static (pictures + narration) and video advance organizers. Herron et al. found that the video advance organizer proved more effective in aiding text comprehension and retention. The research supported the use of video advance organizers prior to the reading of a text (Hanley et al., 1995).

In a 1996 study, Dorothy Chun and Jan Plass investigated the effects of a video advance organizer on subjects' reading comprehension in a multimedia environment. The advance organizer was tested using the multimedia reading program, *Cyberbuch Böll*. The sample total consisted of 160 second-year university students of German (N=160). Subjects were first shown a video preview of the short story they were about to read as an advance organizer before they actually read the story. After watching the preview, students immediately began reading.

First, Chun et al. investigated whether specific types of information contained in the advance organizer facilitated comprehension. Information recalled from the subjects

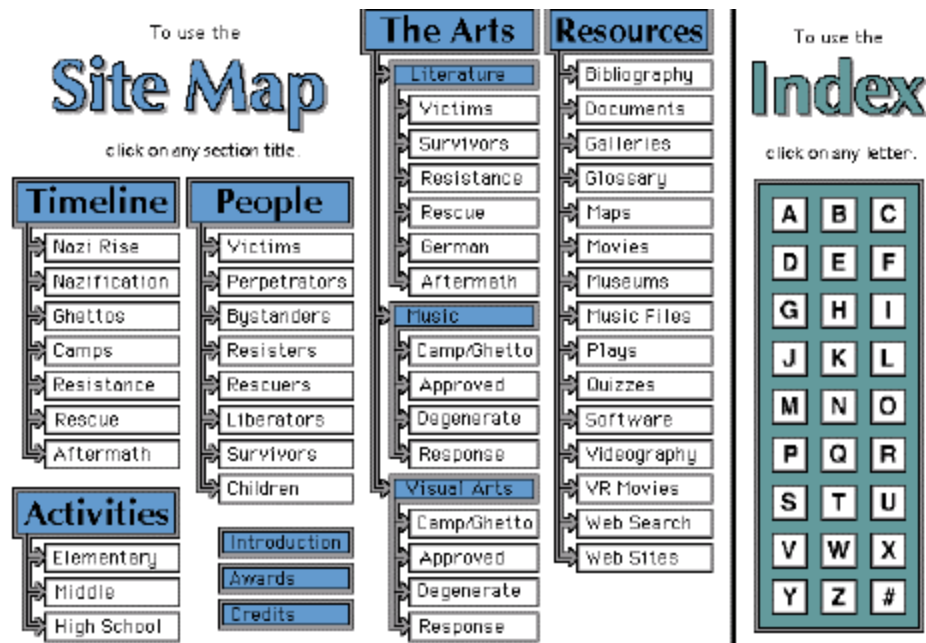
was categorized into two groups, one with information included in the advance organizer and one with information not included in the advance organizer.

The difference between means of numbers of units of information recalled by students that *was* in the advance organizers and that information that *was not*, was statistically significant. In other words, the number of units of information recalled by students that *was* included in the advance organizer was higher. This suggests that when concepts are presented in the video advance organizer, they are remembered to a greater degree than when not. One questions raised by Chun et al. for further investigation on the subject is: Are video advance organizers more memorable because of their video nature (as opposed to the static nature of text or still images alone) (Chun & Plass, 1996).

A Web-based Teacher's Guide

In response to an apparent need and legislative mandate for public school instruction on the history of the Holocaust, graduate students and staff at a major university created a Web-Based Instructional program for Holocaust education. *The Teacher's Guide to the Holocaust*, is now an amalgam of over 7,000 files in a variety of media formats ranging from virtual reality tours, videos, video clips of survivor testimonies and extensive photo galleries, to thought provoking teacher-resource and student-activity documents (<http://fcit.coedu.usf.edu/holocaust>).

FIGURE 1

A Teacher's Guide to the Holocaust

The site has been made available as a resource for all certified and pre-service teachers, many of whom have had little or no training for teaching such sensitive material. The availability and sheer magnitude of *The Teacher's Guide* makes it an invaluable resource for teachers who need to address the Holocaust in their curricula. Its complex, and for many, unfamiliar material and its hypertext format, however, make it a challenge to incorporate into daily curriculum. In order to try and examine the effectiveness of the *Teachers' Guide*, a study was conducted in 2000 at a large state university.

A group of preservice teachers (N=143) at a major university participated in a study concerning the Holocaust and current issues in multiculturalism. The study was

conducted in order to test the effectiveness of the instructional Web site *A Teachers' Guide to the Holocaust* (Calandra, Fitzpatrick, Barron, 2000).

First, all students were asked to complete both knowledge and attitude instruments dealing with the Holocaust and traditionally marginalized groups in America today (see Appendices C, D & E). Second, the experimental group was asked to complete a take-home assignment that required them to create a lesson plan using the *Teachers' Guide* (see Appendix A). The control group was asked to create a lesson plan using a different site not dealing with the Holocaust. Upon completion of their assignments, students were asked to respond to the same instruments they had completed previous to their assignment. More detailed descriptions of the instruments follow in the *Method* section of this report.

Results from the study showed no significant difference in performance between knowledge and attitude pretests (before the assignment) and posttests (after the assignment) or between groups (control and experimental). A very small negative correlation (-.30) was found between the experimental group's (N=56) knowledge about the Holocaust and bias towards traditionally marginalized groups. Finally, it was hypothesized that lack of significance in experimental/control and pre-test/post-test change may have been attributable to a weak treatment: limited amount of direction and engagement required of the subjects. The high level of complexity and unfamiliarity of the site's content as well as its format (hypertext) may have also contributed to a lower level of performance on the knowledge measure and lack of change in attitudes.

A second pilot study was performed at the same university with a smaller number of students (N=32). In this study, one group of students were given the same pre and posttest measures, but were asked to complete a different instrument for their homework assignment. The instrument was a series of 18 questions dealing with facts and issues surrounding the Holocaust. The first five questions were in multiple-choice format. The remaining questions were more open-ended questions requiring short answers. These were more demanding cognitively (see Appendix B). The instrument is described in further detail in the *Method* section of this report.

Results coming soon.

A third pilot study will investigate the use of advance organizers presented before the 18-question survey and will be performed in laboratory conditions. The students will be allotted two to three hours to complete the assignment. Pre and posttest measures will be distributed and collected in the same manner as the previous two studies.

METHOD

Introduction

The experiment proposed here will use a pretest posttest control-group design with random assignment in order to examine the effects of using expository advance organizers before a Web-based history activity on outcome measures of knowledge and attitudes. Performance on an in-lab timed assignment using an instructional Web site will be measured and compared to performance on knowledge and attitude posttest measures. Outcomes for the group using a video advance organizer will be compared to outcomes of those using an expository advance organizer, and a control group working with no advance organizer.

Participants

The participants in the study will be selected from students enrolled in an introduction to computers course in a college of education at a large state university. Because of the impracticality of true random selection from all pre-service teachers in the United States, a convenient sample of intact classes will be used. An Appendix will be inserted later in order to describe the age, race, and gender distribution of the students in both the population and the sample.

Since there are expected to be eight sections of the course in question with around thirty students in each group, the total sample is estimated to be 240. Students from all sections will be randomly assigned to a treatment group and two experimental groups. This would place about 80 students in the control group and each of the three

experimental groups. An a-priori power analysis will determine whether the sample size is large enough in order to observe a moderate effect with an alpha level of 0.05 and a power of 0.80. Cohen's table will be used to determine an appropriate number. Another determinant of sample size will be analysis of the effects recorded during pilot studies.

Measures

Two types of measures were developed for this research: an objective test of Holocaust factual knowledge and two scales to assess attitudes toward diversity and perceptions of traditionally marginalized groups.

The knowledge test was developed by content experts working on the Holocaust website. A test blueprint was developed through an analysis of the content included in the Timeline section of the Holocaust site. There are seven main divisions of this section, focusing on specific stages of the Holocaust in terms of its development. From each of these sections, a number of key ideas were distilled. These ideas were first refined into statements, and subsequently converted into test questions.

The questions were then reviewed and revised by Holocaust content experts and psychometricians. The final version of the Holocaust knowledge test consists of 44 multiple-choice items, each of which presents four response options (see Appendix C). The instrument has been piloted by with preservice teachers at a large state university (Calandra et. al. 2000). The internal consistency reliability (Cronbach's Alpha) for the knowledge test was .77 for the pretest and .68 for the posttest.

The attitude scales were constructed based upon existing validated instruments for measuring tendencies toward bias and stereotyping, as well as general attitudes toward diversity. Two types of items were included in the instrument. First, 21 items presented statements indicative of attitudes both toward marginalized groups in general (e.g., “Minorities have contributed much to the cultural life of America”), and toward specific groups (e.g., “I am usually comfortable around homosexuals”). Responses to each item will be obtained on a 5-point Likert scale (with response options ranging from Strongly Disagree to Strongly Agree). Responses to the 21 items will be averaged to provide an *Affinity Toward Diversity* score. The first items were piloted using preservice teachers at a large state university (Calandra et. al, 2000). The Coefficient alpha for the pretest scores was 0.84, and for the posttest scores it was 0.82.

The second part of the attitude instrument was developed to measure participants’ attitudes of specific groups. A set of 18 bi-polar adjectives (e.g., Honest – Dishonest) was presented in conjunction with a target group of traditionally marginalized people (African-Americans, Hispanic Americans, Jewish Americans, Asian Americans, Persons with Mental Handicaps, and Homosexuals). Responses to each pair of adjectives will be gathered on a 5-point semantic differential scale. Each participant will be presented two of the six marginalized target groups in randomized, counterbalanced versions of the instrument (see Appendix D).

To estimate respondents’ perception of traditionally marginalized groups, an index of bias will be calculated. This index will be obtained by calculating a deviation

score from a neutral response to each item (e.g., deviation from 3.0 on the 5-point semantic differential). As deviations in either direction may be considered bias, the absolute value of the deviation score will be used. The deviation scores will then be averaged across the set of 18 bipolar adjectives and across the four target groups to obtain a mean absolute deviation from neutrality (ABSDEV) score for each respondent. The instrument was piloted using preservice teachers at a large state university (Calandra et al, 2000). Internal consistency reliability estimates for this component of the attitude scales ranged from .80 to .85.

Instruments

A questionnaire will be developed and validated for the lab portion of the treatment. The questionnaire will include seven multiple choice-style questions dealing with factual knowledge about the Holocaust. There will also be a series of higher cognitive level questions requiring short answers of a few sentences (see Appendix B). A panel of Holocaust and education experts will review the questionnaire. It will also be piloted prior to implementation in the same Introduction to Computers course as the study in question. An internal consistency check (Cronbach's alpha) will be run in order to determine reliability of items on the questionnaire. A rubric will be created and similarly checked for validity by expert review (See appendix E).

For the sake of this study, the author will create and validate (using an expert panel) two expository advance organizers as defined by Ausubel and use characteristics for the construction of an advance organizer as put forward by Mayer (described in detail

in chapters I and II). An expository advance organizer is operationally defined below:

1. The Advance organizer will be composed of a short set of verbal, or verbal and visual information.
2. It will be presented prior to a large body of information.
3. It will contain no specific content from that body.
4. It will call forth or help the student create general organizational patterns and relationships within the to-be-learned material.
5. It will help the student build a cognitive construct on which to place new information from the to-be-learned material.
6. Finally, it will influence the learner's verbal and visual encoding processes through the contiguous presentation of verbal and visual information.

The text-based expository advance organizer will consist of a three-sentence introduction to the Holocaust and seven components of the *Timeline* section of *A Teacher's Guide to the Holocaust* worded at a higher level of abstraction, generality, and inclusiveness than the actual material in the site. It will be subjected to expert review and piloted prior to implementation in the same Introduction to Computers course as the study in question (see Appendix F).

A multimedia advance organizer will be developed using Final Cut Pro. The video slideshow will be composed of the same ten sentences from the text-based organizer, however the title graphic from each section of the *Timeline* will accompany the

sentences. Students will be allowed to take as much time as needed to read the ten sentences but will be required to remain viewing the advance organizer for a minimum of 100 seconds (10 seconds per statement). The multimedia advance organizer will also be subjected to expert review and piloted prior to implementation in the same Introduction to Computers course as the study in question (see Appendix G).

Finally, a software evaluation form will be created, validated and piloted prior to implementation in the same Introduction to Computers course as the study in question (see Appendix H).

Procedures

At mid semester, participants will be administered the pretest measures (both knowledge and attitudes) to complete during their mid term examination time. Instructors for each section of the course will read a document advising participants that their surveys will be confidential and their identities will remain anonymous. Students will be given course credit for satisfactory completion (see Appendix I).

Both treatment groups and the control group will perform a two-hour activity in which they will be asked to answer 18 questions of varying levels of difficulty using the Web site *A Teachers' Guide to the Holocaust*. Students will be tested by section and randomly assigned to computers in a university computer lab. In order to control extraneous variables due to environment, student interaction, computer hardware and connectivity, the questions will be answered in a controlled laboratory environment. The

lab will be equally divided into machines that are loaded with three different CD-ROM versions of *A Teachers' Guide to the Holocaust*. Machines for the two treatment groups will have versions of the CD installed that allow students to enter the site only after previewing an advance organizer (either text-based or multimedia.) The activity will last two to three hours and will count for course credit. After students complete their activity, they will fill out a software evaluation form asking them whether they felt the navigation, instructions, and content were useful.

Students' work on the lab assignment will be assessed, but not returned until the posttest measures have been distributed and collected. After two more weeks, during the course final exams, the same knowledge and attitude measures given before the treatment will be administered again to all groups as a posttest. The study will be executed over a total of four weeks.

Data analyses

Data will be analyzed using both analyses of variance and correlational methods. Group difference in changes from pretest to posttest on knowledge and attitude scores will be assessed using repeated measures ANOVA 3(groups) X 2(Time). In addition a One-way ANOVA will be used to examine scores on the Lab activity across groups. Individual item difficulty indices will be used to guide a content analysis of participants' performance on the knowledge test. Finally, correlation analyses (Pearson correlation) will be used to compare knowledge and attitude scores.

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APPENDICES

Appendix A

1. Using *The Teacher's Guide to the Holocaust* as your reference material, create a lesson plan explaining the Nazi idea of the "Final Solution." Information on this topic can be found in the Timeline section, under Nazification, The Ghettos, and The Camps. You can find more information on this topic in the People section under Perpetrators. At the end of each section there is also a link for teachers offering tips on activities, lesson plans, and vocabulary. There is also a Resources section that provides a glossary, book lists, maps, video lists, and movies.
 - ❑ In creating your lesson plan, be sure to include the historical context of the "Final Solution", how and why this was allowed to happen, as well as its ultimate consequences. As you create your lesson, please keep the following in mind:
 - ❑ If your lesson requires students to read a story, please make sure it is age appropriate and include the title of it. The Resources section provides lists of books under a variety of groupings.
 - ❑ Be sure to include a list of the vocabulary words being used in your lesson.
 - ❑ Include a list of all other materials needed for both you and your students to complete this lesson.
 - ❑ If you plan on using this CD program with your students, please make note of the sections you will be using with them.
 - ❑ Give step-by-step directions on how this lesson will be taught.

2. Using *The Teacher's Guide to the Holocaust* as your reference material, create a lesson plan explaining the diversity of people victimized by Nazi oppression. Information on this topic can be found in the People section under Victims. At the end of this section there is a link for teachers offering tips on activities, lesson plans, and vocabulary. There is also a Resources section that provides a glossary, book lists, maps, video lists, and movies to further aid you. Remember to give step-by-step directions for your lesson. As you create your lesson, please keep the following in mind:
 - ❑ If your lesson requires students to read a story, please make sure it is age appropriate and include the title of it. The Resources section provides lists of books under a variety of groupings.
 - ❑ Be sure to include a list of the vocabulary words being used in your lesson.
 - ❑ Include a list of all other materials needed for both you and your students to complete this lesson.
 - ❑ If you plan on using this CD program with your students, please make note of the sections you will be using with them.

Appendix B**Choose the best possible answer:**

1. Who were the Brownshirts?
 - a. Communist youth
 - b. Hitler youth
 - c. Nazi thugs who spread terror on the streets
 - d. The new Soviet army

2. Ernst Röhm, the leader of the Sturmabteilung (SA) was shot during which event?
 - a. The Beer Hall Putsch
 - b. The Night of the Long Knives
 - c. The Valentines Day Massacre
 - d. The Day of the Dead

3. How many Jews were massacred in death camps alone?
 - a. 1.5 million
 - b. 2.7 million
 - c. 5.3 million
 - d. 10.2 million

4. Anti-Nazi partisan fighters were mostly Jewish.
 - a. True
 - b. False

5. Nazis began to liquidate the ghettos and their millions of residents around 1942.
 - a. True
 - b. False

Answer the following:

6. Many Germans believed that Germany lost World War I because it had been "stabbed in the back" by whom?
 - a.
 - b.
 - c.

7. Where did Hitler write his book *Mein Kampf*?
 - a. Why was he there?
 - b. How long did he stay?

8. What are two reasons for Nazi popularity in Germany after World War I? Were all Germans Nazis?

9. Why were the first inmates of the concentration camps (i.e. Dachau) put there?
10. What did Nazis intend when they created the *Lebensraum* policy?
11. How would a Jewish ghetto in Europe around the time of World War II compare to your notion of a modern ghetto?
12. Describe one aspect of daily life for each of the following Jewish ghetto residents in a few sentences. Talk about their chores, obstacles they had to face, chances for survival, etc.
 - a. An adult
 - b. A child
13. List five different categorizations of victims sent to Nazi concentration camps. Give a short description of each including why they were sent there.

Categorization	Reasons for being sent
<i>i.e. Gypsies or Roma</i>	<i>Genetically and socially unacceptable under Nazi policy</i>

14. Briefly describe the Final Solution.
15. Give three different examples of resistance to the Nazi party and to Nazi policy.

i.e. Having secret Jewish prayer meetings in ghettos

 - a.
 - b.
 - c.
16. What is a bystander (in terms of the Holocaust)?
17. Why did Allied soldiers carefully record what they found when they liberated Nazi camps?
18. What was a displaced persons' camp in Europe after World War II?

Appendix C

THE HOLOCAUST

Directions

Please select the **BEST** possible choice to answer the following items. Indicate your selection by circling the letter corresponding to your response.

1. The Holocaust was
 - a. a hoax.
 - b. a Jewish holiday.
 - c. the systematic murder of millions of non-conformists to Nazi policy.
 - d. an exaggerated story about Jews during the Second World War.

2. During the five years immediately following the *First* World War, German society
 - a. attempted to reestablish friendly relations with foreign countries.
 - b. closely followed the provisions set by the Versailles Peace Treaty.
 - c. fell into a state of internal disorder and accusation.
 - d. grew together as a united nation.

3. The Nazi party's rise to power in Germany was a result of
 - a. scare tactics/street-violence.
 - b. the assassination of the Reich chancellor.
 - c. grassroots protests and demonstrations.
 - d. social and economic stability in Germany.

4. Hitler's political agenda was described in which book?
 - a. *War and Peace*
 - b. *The Communist Manifesto*
 - c. *Mein Kampf*
 - d. *Das Reinheitsgebot*

5. How did Hitler become a member of the Reichstag (German parliament)?
 - a. by running for office legitimately
 - b. as a result of a military overthrow
 - c. as a result of bloody revolution
 - d. through an emergency decree

6. What was one of the manifestations of the *Führerprinzip*?
 - a. Hitler published a book describing his plans for Germany
 - b. the German parliament was burned
 - c. The Rosenstrasse protest was staged
 - d. Nazi Youth swore an oath to die for Hitler

7. The Beer Hall Putsch was
 - a. a Nazi celebration of their Aryan ancestry.
 - b. an attempted governmental overthrow by the Nazis in 1923.
 - c. the murder of Archduke Ferdinand.
 - d. the first official meeting of the Nazi party in 1919.

8. As a cover for military defeat, many Germans wanted to believe that they had lost the First World War because
 - a. the French were physically stronger men.
 - b. the state of Bavaria had betrayed them.
 - c. Britain was too great a power.
 - d. certain groups had betrayed them at home.

9. In 1933, the *Reichstag* (German parliament) was burned, allowing
 - a. Communists in Germany to take over.
 - b. Hitler to become king of Germany and Austria.
 - c. Hitler to restrict civil liberties of Nazi opponents.
 - d. Hitler to orchestrate the invasion of Poland.

10. In 1933, Hitler was officially appointed
 - a. head of the Bavarian separatists.
 - b. Chancellor of Germany.
 - c. Prime Minister.
 - d. Reich Bürger.

11. When did the Nazi party *officially* come into power in Germany?
 - a. 1929
 - b. 1933
 - c. 1938
 - d. 1942

12. The systematizing and regulating of discrimination of Jews in early Nazi Germany was made possible through the
 - a. Nuremberg laws.
 - b. Emergency decree of 1933.
 - c. Final solution.
 - d. Wannsee Conference proceedings.

13. The first Nazi concentration camp used mainly for political prisoners was
 - a. Mein Kampf.
 - b. Auschwitz.
 - c. Dachau.
 - d. the Reichstag.

14. No significant resistance was encountered in 1938 when Hitler annexed
 - a. Germany.
 - b. Britain.
 - c. Austria.
 - d. Russia.

15. The second World War was caused by the
 - a. assassination of the Chancellor.
 - b. assassination of the Archduke Ferdinand.
 - c. invasion of Czechoslovakia.
 - d. invasion of Poland.

16. *Kristallnacht* is
 - a. a Nazi pogrom against German Jewry.
 - b. anti-semitism.
 - c. the Nazi style of warfare.
 - d. the final solution.

17. Which of the following is true about anti-semitism?
 - a. It is learned, not innate.
 - b. It was invented by Nazis.
 - c. It is a twentieth-century phenomenon.
 - d. It is **not** a form of prejudice.

18. Jewish ghettos were formed by the Nazi regime in order to
 - a. force Jews to build an integrated society in Germany.
 - b. warehouse Jews to be later sent to concentration and death camps.
 - c. allow Jews to develop separate but equal communities of their own.
 - d. protect Jews from mistreatment and violence by German citizens.

19. The *Terezin* ghetto was
 - a. the ghetto that became the most deadly of the Nazi death camps.
 - b. a model ghetto used to fool outsiders.
 - c. the ghetto outside of Berlin where the “final solution” was initiated.
 - d. the ghetto where hundreds of thousands of Jews were gassed.

20. The first rebellion in a major city against established Nazi oppression was
 - a. Operation *Barbarossa*.
 - b. The Beer Hall Putsch.
 - c. The Warsaw ghetto uprising.
 - d. *Kristallnacht*.

21. What were *Einsatzgruppen*?
 - a. military intelligence units in the German regular army
 - b. Nazi killing squads
 - c. Jewish leaders within Nazi-formed ghettos.
 - d. Hitler’s secret police.

22. In order to quickly and severely punish resisters, what was decreed in 1941?
 - a. The Final Solution
 - b. The Night and Fog order
 - c. The Warsaw Pact
 - d. The Marshal Plan

23. The killing factories created to annihilate European Jewry were called
 - a. ghettos.
 - b. detention centers.
 - c. death camps.
 - d. prisoner of war camps.

24. The Nazi answer to the “Jewish question in Europe” reached in Wannsee in 1942 was called
 - a. “The Final Solution.”
 - b. *Mein Kampf*.
 - c. “The New World Order.”
 - d. “The Night and Fog Order.”

25. The law stating that a war of aggression, in any form, is prohibited under international law was a conclusion of
 - a. North Atlantic Treaty Organization.
 - b. Organization of the American States.
 - c. The Weimar Republic.
 - d. The International War Crimes Tribunal.

26. Roughly what percent of the European Jewish population perished as a result of the Holocaust?
 - a. 10%
 - b. 20%
 - c. 50%
 - d. 80%

27. As a result of Nazi oppression during World War II, the number of people murdered was in the
 - a. tens of thousands.
 - b. hundreds of thousands.
 - c. millions.
 - d. billions.

28. How old were the majority of Holocaust victims?
- less than 18 years of age.
 - between 18 and 25 years of age.
 - more than 50 years of age.
 - all ages.
29. People murdered because of Nazi doctrine did **not** include
- Gypsies.
 - National Socialists.
 - German-born Jews.
 - Poles.
30. An example of passive resistance to the Nazis was
- the Warsaw ghetto uprising.
 - smuggling food and clothing.
 - the assassination of Rudolf Heydrich.
 - the Beer Hall Putsch.
31. Active resistance to the Nazis was
- nonexistent in Europe.
 - supported by the Chancellor of Germany.
 - undertaken at great risk.
 - occurred only in Denmark.
32. Bands of armed resisters to the Nazis mostly situated in eastern Europe were called
- Gypsies.
 - Einsatzgruppen.
 - Apparatchiks.
 - Partisans.
33. Any form of resistance to Nazi oppression in Germany was
- generally left unpunished.
 - punishable by death.
 - generally ignored by authorities.
 - punished by large fines.
34. Who led an effort that saved 100,000 Hungarian Jews?
- Neville Chamberlain
 - Radvance organizersul Wallenberg
 - Anne Frank
 - Josef Stalin
35. What happened when allied troops discovered concentration camps?
- They tried to cover up what they found.
 - They made careful records of what they found.
 - They quickly left the scene of the crime.
 - They ignored the atrocities they found.
36. Almost 8,000 Jews were hidden and ferried to safety by the citizenry of
- Austria.
 - Switzerland.
 - Germany.
 - Denmark.

37. The number of people displaced after the Second World war reached
- 1-2 million.
 - 7-9 million.
 - 1-2 billion.
 - 7-9 billion.
38. After the war, many of those displaced were
- readily granted visas into more stable countries.
 - provided with newly rebuilt homes.
 - placed in “displaced person” camps.
 - sent to Israel.
39. When the war was over, German citizens who lived near concentration camps during the war were
- tried by a military court and sentenced to prison.
 - shown films of the allied liberation of the camps and details of the atrocities.
 - told to move anywhere else except for Palestine.
 - led on mandatory tours of the camps, and forced to gather and bury bodies.
40. The Nuremberg trials were historically important because.
- Hitler was convicted of war crimes.
 - Nazi war criminals were tried before an international tribunal.
 - NATO was formed.
 - the Warsaw Pact was initiated.
41. Those people sent to the six death camps
- went through a selection process.
 - were allowed to live as long as they could work.
 - were executed only for trying to escape.
 - were killed upon arrival.
42. In regard to responsibility for actions, the International War Crimes Tribunal concluded that
- soldiers acting under orders are not responsible for their actions.
 - killing is unavoidable in acts of war.
 - the individual is responsible for crimes carried out under superiors’ orders.
 - officers are not responsible for the individual actions of their soldiers.
43. Adolf Eichmann was
- a member of the International War Crimes Tribunal.
 - Reich Chancellor in 1945 after the war.
 - responsible for implementation of the Final Solution.
 - head of the German armed forces during the war.
44. Restitution efforts for the Holocaust
- ended shortly after the war.
 - were never authorized.
 - continue to this day.
 - started years after the end of the war.

Appendix E

Q#	Full credit 1pt.		
1	c		
2	b		
3	b		
4	b		
5	a		
Q#	Full credit 3 pt.	Partial credit 2 pt.	Partial credit 1 pt.
6	All: Jews, Communists, Leftwing politicians	Two out of three: Jews, Communists, Leftwing politicians	Any one
7	All of the highlighted concepts: While in prison, Hitler wrote volume one of Mein Kampf (My Struggle), which was published in 1925. Adolf Hitler's attempt at an armed overthrow of local authorities in Munich, known as the Beer Hall Putsch, failed miserably. Hitler was released from prison after one year.	Any two out of the highlighted concepts:	Any one
8	<p>Part 1: any 2 of the following:</p> <ol style="list-style-type: none"> Some Germans felt betrayed at the end of the war by leftists and Jews German pride had been hurt by the defeat of WW II, and Nazis supported German nationalism German politics were in a state of chaos and Nazis promised stability Nazis were against communism Nazis were anti-Semitic <p>AND</p> <p>Part 2: No, all Germans were not Nazis.</p>	<p>Part 1: any 1 of the following</p> <p>AND</p> <p>Part 2: No, all Germans were not Nazis.</p>	Either Part 1 or Part 2 correct
Q#	Full credit 2 pt.		Partial credit 1 pt.
9	The first inmates of concentration camps in Nazi Germany were put there for their political beliefs .		NA
10	Any 2 of the highlighted concepts: Nazis believed that Eastern Europe had to be conquered to create a vast German empire for more physical space , a greater population , and new territory to supply food and raw materials.		Any one

Q#	Full credit 3 pt.	Partial credit 2 pt.	Partial credit 1 pt.														
11	<p>2 similarities and 2 differences e.g. Nazi ghettos American ghettos</p> <table border="1"> <tr> <td>Only for Jews</td> <td>Mixed although greatly African American</td> </tr> <tr> <td>Transit area for death camps</td> <td>Result of segregation</td> </tr> <tr> <td>Residents could not leave</td> <td>You are allowed to leave</td> </tr> <tr> <td>Many starved to death</td> <td>Many are malnourished</td> </tr> <tr> <td>Many were executed</td> <td>High crime</td> </tr> <tr> <td>Poverty</td> <td>Poverty</td> </tr> </table>	Only for Jews	Mixed although greatly African American	Transit area for death camps	Result of segregation	Residents could not leave	You are allowed to leave	Many starved to death	Many are malnourished	Many were executed	High crime	Poverty	Poverty	<p>1 similarity and 1 difference</p>	<p>One similarity or one difference</p>		
Only for Jews	Mixed although greatly African American																
Transit area for death camps	Result of segregation																
Residents could not leave	You are allowed to leave																
Many starved to death	Many are malnourished																
Many were executed	High crime																
Poverty	Poverty																
12	<p>One aspect for each (adult and child) e.g. adult child</p> <table border="1"> <tr> <td>Starvation</td> <td>Starvation</td> </tr> <tr> <td>Fighting disease</td> <td>Fighting disease</td> </tr> <tr> <td>Scrounging for food</td> <td>Scrounging for food</td> </tr> <tr> <td>Trade on the black market</td> <td>Trade on the black market</td> </tr> <tr> <td>Execution</td> <td>Execution</td> </tr> <tr> <td>Suicide</td> <td>Deportation to camps</td> </tr> <tr> <td>Deportation to camps</td> <td></td> </tr> </table>	Starvation	Starvation	Fighting disease	Fighting disease	Scrounging for food	Scrounging for food	Trade on the black market	Trade on the black market	Execution	Execution	Suicide	Deportation to camps	Deportation to camps			<p>One aspect for either</p>
Starvation	Starvation																
Fighting disease	Fighting disease																
Scrounging for food	Scrounging for food																
Trade on the black market	Trade on the black market																
Execution	Execution																
Suicide	Deportation to camps																
Deportation to camps																	
13	<p>5 categories and descriptions: e.g.</p> <table border="1"> <tr> <th>Categories</th> <th>Reasons for being sent</th> </tr> <tr> <td>Jews</td> <td>Genetically and socially unacceptable</td> </tr> <tr> <td>Homosexuals</td> <td>Genetically and socially unacceptable</td> </tr> <tr> <td>Slavic people</td> <td>Genetically and socially unacceptable</td> </tr> <tr> <td>Prisoners of war</td> <td>No mercy no prisoners policy</td> </tr> <tr> <td>Political prisoners</td> <td>Political opposition was dealt with this way</td> </tr> </table>	Categories	Reasons for being sent	Jews	Genetically and socially unacceptable	Homosexuals	Genetically and socially unacceptable	Slavic people	Genetically and socially unacceptable	Prisoners of war	No mercy no prisoners policy	Political prisoners	Political opposition was dealt with this way	<p>3 categories and descriptions:</p>	<p>At least one category with description</p>		
Categories	Reasons for being sent																
Jews	Genetically and socially unacceptable																
Homosexuals	Genetically and socially unacceptable																
Slavic people	Genetically and socially unacceptable																
Prisoners of war	No mercy no prisoners policy																
Political prisoners	Political opposition was dealt with this way																
14	<p>Full credit 2 pt.</p> <p>The Final Solution was a Nazi plan to systematically exterminate the Jewish population of Europe.</p>		<p>Partial credit 1 pt.</p> <p>NA</p>														
15	<p>Full credit 3 pt.</p> <p>3 of any of these: Partisan fighters, passive resisters (worshippers, performers), underground members, protesters, boycotters</p>	<p>Partial credit 2 pt.</p> <p>2 of any of these: Partisan fighters, passive resisters (worshippers, performers), underground members, protesters, boycotters</p>	<p>Partial credit 1 pt.</p> <p>Any one</p>														

16	One of the two highlighted concepts: A bystander is one who is present at some event without participating in it . Bystanders were those who allowed atrocities to occur without acting against them .	NA
17	Something similar to the highlighted concept: Allied soldiers carefully recorded what they found when they liberated Nazi camps because they thought nobody would believe the horror they witnessed during camp liberation.	NA
18	One of the highlighted concepts: The tens of thousands of Jewish survivors of Nazi camps either could not or did not want to return to their former homes in Germany or eastern Europe, and many lived in special DP camps while awaiting immigration to America or Palestine .	NA

Appendix F

Please read the following statements carefully. Take as much time as you need.

- Germany and its allies were defeated in the First World War.
- Some people there blamed their loss and humiliation on others living in Germany.
- Certain political, religious and ethnic groups became the target of German resentment and scapegoating.
- One political party in Germany rose to power using hatred and intolerance as a basis for their beliefs and goals.
- Using terror tactics and propaganda against select political, religious and ethnic groups, Nazis gained power in Germany after the First World War.
- Nazis persecuted those they thought to be a threat to their Germany, separating them from the general population.
- Concentration Camps were created to separate Nazi victims from German society and kill them.
- Those who resisted faced torture and death.
- Few were rescued or otherwise survived.

Click [here](#) to continue.

*Appendix G***Slide from Prototype Using Microsoft PowerPoint.**

Aftermath

1918-1933-1939-1941-1942-1944-1945-2000

- Germany and its allies were defeated in the First World War.
- Some people there blamed their loss and humiliation on others living in Germany.
- Certain political, religious and ethnic groups became the target of German resentment and scapegoating.
- One political party in Germany rose to power using hatred and intolerance as a basis for their beliefs and goals.
- Using terror tactics and propaganda against select political, religious and ethnic groups, Nazis gained power in Germany after the First World War.
- Nazis persecuted those they thought to be a threat to their Germany, separating them from the general population.
- Concentration Camps were created to separate Nazi victims from German society and kill them.
- Those who resisted faced torture and death.
- Few were rescued or otherwise survived.

Nazis murdered millions as a result of their policy of hatred and intolerance towards those they thought to be different.

[Click here to continue](#)

Appendix H

A Teacher's Guide to the Holocaust
Web site Evaluation Form

Directions: We would like to know what you think about the Web site. Your views are very important and your answers will help us to produce a more useful product. Participation is voluntary and responses will be kept confidential. *Thank you* for participating.

How easy was it to:	Very Difficult	Difficult	Easy	Very Easy
Follow the directions provided in the Web site?	1	2	3	4
Use the Web site without assistance?	1	2	3	4
Move around in the Web site?	1	2	3	4
Find the required information on the screen?	1	2	3	4
Read the text on the screen?	1	2	3	4

How would you rate the following:	Poor	Fair	Good	Excellent
Links used to move between different sections?	1	2	3	4
Pictures, movies and sound used in the program?	1	2	3	4
Clarity of information presented in the program?	1	2	3	4

How well did the Web site:	Poor	Fair	Good	Excellent
Maintain your attention?	1	2	3	4
Stimulate your interest in the Holocaust?	1	2	3	4
Provide resources necessary to teach the Holocaust?	1	2	3	4

If you could change one thing about this Web site what would it be?

*Appendix I***Intro Script for Holocaust Fall Study**

Students should write the **first initial of their last name and last four digits of their ss#** on both the scantron sheets and the test forms.

Things to Do	Things to Say
<i>Distribute materials to students</i>	A packet of materials is currently being distributed. Please take one from the top of the stack and pass the rest down the row.
<i>Hold up an example of each component as you mention them</i>	<p>You should each have a packet containing:</p> <ul style="list-style-type: none"> <input type="checkbox"/> a booklet titled "Perceptions and Beliefs About Others," <input type="checkbox"/> a test titled "Holocaust," <input type="checkbox"/> a scantron answer sheet
	Please work independently, and do not share information with your friends or neighbors.
<i>If anyone is missing a part, give it to them</i>	Please check to be sure that you have these three items in your packet. If you are missing something, raise your hand.
<i>Hold up an example of the booklet.</i>	Begin with the booklet entitled "Perceptions and Beliefs About Others." These questions do not have right or wrong answers, but your responses should represent your honest opinion. You should write your responses directly in this booklet. Be sure to complete the information on the back of the booklet, as well as the questions inside. You may feel uncomfortable answering questions regarding events that occurred during the Holocaust.
<i>Hold up an example of the exam and answer sheet.</i>	When you have finished with the booklet, begin work on the exam titled "Holocaust." These questions do have right and wrong answers. There may be questions that you don't know the answer to. Do not worry about these. Answer the questions as best as you can, and guess if you do not know the answer. For this test, you should use a #2 pencil to completely fill the bubbles for your choice on your answer sheet. You will not be asked to print your name or identification number on these forms.
<i>Hold up an example of both instruments</i>	For participation you will earn credit for this assignment. Your completion of both the perceptions survey and the knowledge test will earn the credit.
<i>Hold up an example of booklet</i>	<p>When you have completed the items in the perceptions booklet and the knowledge test, please place the test questions and your scantron answer sheet inside the purple booklet. Turn the materials your course instructor.</p> <p><i>Thank you for your participation!!</i></p>