TO WHAT EXTENT DOES TEXTUAL REINFORCEMENT ENHANCE AN AUDIENCE'S COMPREHENSION AND RECALL OF PLOT ELEMENTS IN A SHORT, ANIMATED MYSTERY PRESENTED ON VIDEO

A Thesis

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Abstract

Animation with text is a highly effective tool in the reinforcement of comprehension and retention, when applied as a theatrical approach to instruction (Gregg & Farnham, 1975; Hwang, 1999; McGallagher, 1975; Schleppegrell & Oxford, 1988; Tomlin & Villa, 1994; Williams, 1999). This is true whether it is moving text, pictures, or simply interesting transitions between visual segments. It can be an effective attention grabber, which lays the necessary foundation for learning (Gagne, 1968, 1970).

This study investigated the effects of textual reinforcement on an audience's comprehension and recall of plot elements in a short, animated mystery presented on video. Two identical short animations were created, and then text was applied to one, reinforcing the audio and visual content. Both versions were burnt to DVDs.

Six sections of the Introduction to Speech Communication course at Kutztown University were used for the study, with three sections randomly selected to view the experimental (textually enhanced) version and three sections viewing the control version. This course was selected for the sample because it is required of all majors at the University.

Immediately following all presentations, a fourteen-item questionnaire based on the program content was administered to test retention and comprehension of the information in the short animation. The literature suggested that the textual reinforcement in the experimental version would increase both retention and comprehension of program content.

This study found a highly significant increase in retention in the experimental group, but found no significant difference in comprehension between the two groups.

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Chapter 1

Introduction

Problem Statement

To what extent does textual reinforcement enhance an audience's comprehension and recall of plot elements in a short, animated mystery presented on video?

Definition of Terms

1. Textual reinforcement- Text inserted in an animated video to reinforce audio and visual content
2. Enhance- The degree to which an audience, presented with textual reinforcement, retains more information and demonstrates increased comprehension as measured by a written test.
3. Audience- Undergraduate students enrolled in Introduction to Speech Communication classes at Kutztown University.
4. Comprehension- The ability to understand a mystery plot and deduce the solution to the mystery.
5. Recall- The amount of factual information retained immediately following viewing a short video animation.
6. Plot Elements- Characters, locations, and actions presented in a short video animation.

7. Short, Animated Mystery- A three-minute, animated mystery conceived and produced by the researcher.
8. Video- The production was released on DVD and shown to 5 of the 6 participating classes on identical equipment (a 30 inch CRT). Due to logistics, one class had to view the program on a similar sized CRT monitor, but from a VHS copy.

Significance of the Study

Animation with text is a highly effective tool in the reinforcement of comprehension and retention, when applied as a theatrical approach to instruction (Gregg & Farnham, 1975; Hwang, 1999; McGallagher, 1975; Schleppegrell & Oxford, 1988; Tomlin & Villa, 1994; Williams, 1999). This is true whether it is moving text, pictures, or simply interesting transitions between visual elements. It can be an effective attention grabber, which lays the necessary foundation for learning (Gagne, 1968, 1970). Therefore, new technological advances in the forms of visual media, such as television and videos, make it possible for a learner to expand and encompass learning, so it is imperative that we incorporate a new language and visual learning models (Kellerman, 1992; Schmidt-Reinheart, 1994).

Limitations of the Study

1. The experiment was conducted with a limited amount of time.
2. The selection of the sample involved using existing classes which may have included some self-selection on the part of the subjects depending on the time of day and choice of professors.
3. This instrument did not take into consideration prior exposure to experiences in learning from animation and text.

Chapter 2

Review of the Literature

General Learning and Communication Theories

Psychology's roots are in philosophy. William James, one of the first American psychologists, was head of the first Psychology department at Harvard University. He could not decide whether to enter the field of philosophy or psychology (Sprinthall and Blum, 1980). However, he studied the significance of learning and later called habits, an "enormous fly wheel of society, its most precious conservative agent. It keeps the fisherman and deckhand at sea through winter; it holds the miner in his darkness" (Sprinthall and Blum, 1980, p. 209). Out of those early years of psychology two separate styles of learning and study of memory emerged. The first was called Declarative and the other was Procedural (Sprinthall and Blum, 1980).

General Learning Theories and Process; Learning Defined

According to Norman (1982), "learning is the act of deliberate study of a specific body of material, so that the material can be retrieved at will and used with skill," (p. 3). Learning is the process of creating new knowledge by building on current knowledge, the more learning the better structured and qualitatively different foundations of knowledge develop. Thus, well designed information for effective learning is as important as what is learned (Jones & Baxter, 1999).

Early Associative and Cognitive Theorists

According to Sprinthall and Blum (1980, p. 210), "declarative learning is the process of storing information such as names, dates, past events, and facts, where as procedural learning is made up of motor patterning and conditioning." John Anderson's *Adaptive Control of Thought* (1976, 1983a, 1983b, 1993) provides a theoretical explanation for the fundamental ways that people are believed to receive, store, and retrieve information, especially in the area of elaborative encoding. However, another group of psychologists, led by Max Wertheimer, around 1910 stated, "The whole is more then the sum of its parts." They took a different approach, feeling that learning required thinking and insight (Sprinthall & Blum, 1980, p. 211). With great theoretical debates two main schools of thought on learning have emerged, Associative Learning and Cognitive Learning.

The Associative theorist saw learning as the result of connections or associations between stimuli, responses, and sense impressions. While the early Cognitive theorists viewed leaning as a reorganization of perceptions, this reorganization allows the learner to perceive new relationships, solve new problems, and gain a basic understanding of a subject. Both Associative and Cognitive schools focused on different learning styles which paralleled another controversy in the field of psychology between Behaviorism and Gestalt psychology.

The Behavioral psychologist leaned toward the Associative school of psychology, whereas, the Gestalts leaned toward the Cognitive theorists style of learning (Sprinthall & Blum, 1980).

The Cognitive theorists also believed learning was a process and divided the memory processes into stages of acquisition, storage, and retrieval (Bruning, Schraw & Ronning, 1998). According to Sprinthall and Blum (1980) retrieval is the output end of the memory

process, and storage refers to internal memory or the persistence of information over time, and out of this process was formed the Information Processing Theory.

The Information Processing theorists took some elements from the Behaviorists, but leaned toward Gestalt's orientation. Information Processing theorists' main platform rested on that of the Cognitive/Gestalt orientation. The Information Processing theory compares the process of learning to a computer's information process; input, storage, process, then output or retrieval (Sprinthall & Blum, 1980). The human cognition Information Processing model is divided into three integral modes of learning; sensory memory, short-term memory, and long-term memory (Cooper, 1998).

General Learning Process

There are three basic elements involved in the interaction of learning in the cognitive domain; encoding, storage, and retrieval. Encoding is translating the stimulus into a recognizable format for the cognitive system (Best, 1992). In several studies, learning was found to be better when participants actively participated in the process (Bobrow & Bower, 1969; Jacoby, 1978; Slamecka & Graf, 1978). Also, a study by Paivio and associates suggested that the effects of dual-coded, interacting imagery led to superior learning (Paivio & Foth, 1970; Bower, 1972).

The Dual-coding theory, according to Paivio, attempted to give equal weight to verbal and non-verbal processing. Paivio (1986) stated, "Human cognition is unique in that it has become specialized for dealing simultaneously with language and with nonverbal objects and events. Moreover, the language system is peculiar in that it deals directly with linguistic input and output (in the form of speech or writing) while at the same time serving a symbolic function with respect to nonverbal objects, events, and behaviors, any representational theory

must accommodate this dual functionality" (p 53). Paivio's theory assumes that there are two cognitive sub-systems, one for representation, to process nonverbal objects/events and the other dealing with language. He also hypothesizes two different types of representational units, mental images and verbal. The theory identified three types of processing: (1) verbal or non-verbal representations, (2) referential, and (3) associative processing (Paivio, 1986).

The next step in the process is storage. It is the process of retaining the encoded information in our memory. When storing encoded information it appears people organize the data. Tulving (1962) observed that when participants are presented with a list of words with no relationships, the participants recalled the words in clusters and that these clusters tended to remain intact. Therefore, he concluded the participants appeared to organize the list of words. Recall was found to be clustered together when words from a list were randomly paired together (Jenkins & Russell, 1952). Bower, Clark, Lesgold, and Winzenz (1969) and Cofer, Bruce, and Reicher (1966) found recall and the degree of clustering was increased when they told participants the categories before giving them a list of words. Cartoons or animations increased recall further and may have allowed participants to understand, organize, store, and retrieve the text. Hearing textual passages improved learning, compared to seeing an explanatory cartoon after seeing the text, or seeing no cartoon (Bransford & Johnson, 1972).

Researchers have found that individuals learn best when information is presented in their preferred styles (Riding & Grimley, 1999). There are three basic factors that have an impact on cognitive change: (a) the learners' existing knowledge and experience, (b) the learners' style or inclination to learning, and (c) individual approach to learning (Wild &

Quin, 1998). The experiments of Walker, Jones, and Mar (1983) on recall found that when the last sentence was difficult to understand and required more effort to process, the information was recalled better. Another study by Salomon (1984) also supported the idea that processing would increase elaborative encoding, and learning.

The third element involved in the interaction of learning in the cognitive domain is retrieval. Retrieval is the process of recovering information. There are two general types of retrieval, recall and recognition. To recall information, the person generates an image, and then searches cognitive memory to recognize it (Hulse, Deese, & Egeth, 1975). An example of recall occurs when you learn something, and then are asked to write it down later (Johnson, Dark, & Jacoby, 1985). Recognition occurs, when you learn something, then are asked to identify it later. Recognition performance is generally better than recall performance (Wessels, 1982). Therefore, for instructional material to be effective it has to be compatible with the human learning processes of input and retrieval (Clark & Mayer, 2003).

According to Dual-coding theory, information is processed through two independent channels, verbal information such as text or auditory words, and nonverbal information such as illustrations and sounds. Recall is better when information is processed through both the verbal and pictorial channels (e.g., Mayer & Anderson, 1991; Paivio, 1967, 1991; Paivio & Csapo, 1973).

The memory system is where the active process for learning takes place. In order to retrieve information from long-term memory it first has to be transfered to do the task (Bruning, Schraw & Ronning, 1998). However, the cognitive load can be reduced if there is prior knowledge (Mayer, 2001; Clark & Mayer, 2003). Rehearsal is a good way to process

information from working memory to long-term memory. A study by Bahrick, Clark, and Bahrick (1967) used a technique called "false recognition" to find support for the existence of visual codes in long-term memory.

Research has shown that creating effective visual representation will improve a person's ability to recall and understand (Bellezza, 1983, 1986; Decker & Wheatley, 1982; Clark & Pavio, 1991; Mayer, 2001). When information is presented with visual presentation subjects were able to recall more words because the visuals were being encoded as images in the memory for retrieval (Bellezza, 1986). Retrieval was most effective with the help of visuals aiding the connection between the stored information and retrieval (Kulhavy, Lee & Caterino, 1985). Visuals can help a student organize information, as well as improve both recall and comprehension of information (Winn, Li & Schill, 1991). Meaning can be assigned to information when it is presented visually, then it is connected to preceding information already stored in the long-term memory (Hirtle & Jonides, 1985). With carefully constructed visuals people can organize information better (Winn, Li & Schill, 1991).

Sensory Memory

Sensory memory deals with all incoming stimuli: sight, sound, smell, taste, and touch. For a brief moment the sensory register holds unprocessed sensory information from an external stimulus before it sends it to the internal memory. The sensory information system can only process a limited amount of information at a time. The sensory register increases with age, particularly in early elementary children (Bruning, Schraw & Ronning, 1998.) Therefore, according to Cooper (1998) the information introduced to children should be age appropriate, because the human memory has a limited capacity for processing information. One strategy to increase recall is chunking the information, (Bruning, Schraw

& Ronning, 1998.) By dividing a large amount of information into smaller groups which will aid in the process of recall (Cooper, 1998).

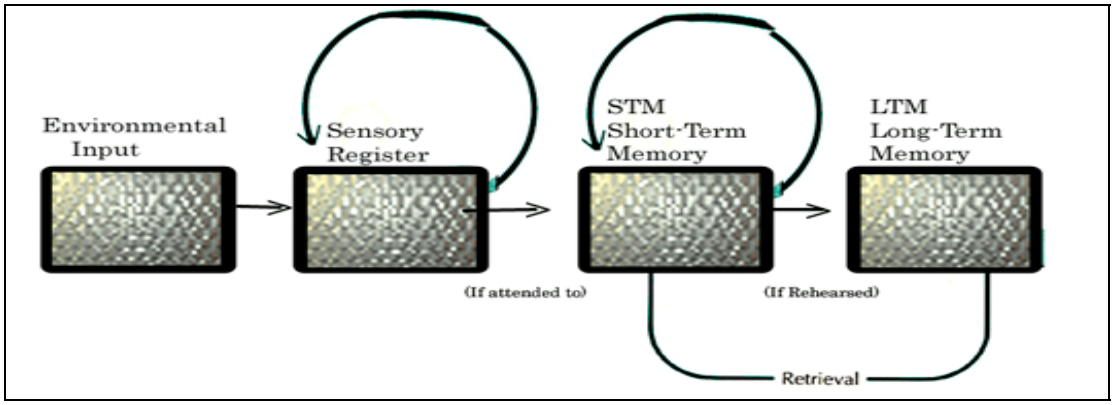
Short-term Memory

Sprinthall and Blum (1980) discuss short-term memory as the first of the two main systems which encode string information in sensory memory, also called it the working or active memory. They discussed transfer of information as the key in the process of leaning. Conventional instruction only allow the processing of information to be copied to short-term memory, however many people learn best when made active in the process of information. Computers are unique to media, in that they can interact with a student in a processing way (Martin & Szabo, 1990). This simulates the deep cognitive processing (Anderson, et al, 1975).

Long-Term Memory

Long-term memory is second in the information processing system. It passes information on and has the potential for holding prearranged information for a lifetime. Once in the long-term memory according to the dual-code theory, the information remains as visual images and verbal representation (Sprinthall & Blum, 1980). Dual-coding theorists believe, "there is a strong emphasis on the use of referent objects; pictures, activities, and mental imagery are strategies used in the process for learning as a second language and can be effective in promoting learning" (Paivio, 1990, p. 257). The diagram below illustrates the main features of the information process (Paivio, 1990, p289).

Figure 1. The information-processing model.



Cultivation Analysis

Cultivation Analysis argues that television (and other media) plays an extremely important role in how people view their world. According to Cultivation Analysis, in modern culture most people get much of their information in a mediated fashion rather than through direct experience. Thus, mediated sources can shape people's sense of reality. This is especially the case with regard to violence, according to the theory. Cultivation Analysis posits that heavy television viewing cultivates a sense of the world that is more violent and scarier than is actually warranted.

According to Gay and Donald Lumsden (1996, p. 319), "Cultivation Analysis is a theory that predicts and explains the long-term formation and shaping of perceptions, understanding and beliefs about the world as a result of consumption of media messages." It is rooted in James Carey's cultural definition of communication, which states "Communication is a symbolic process whereby reality is produced, maintained, repaired, and transformed" (Carey, 1975, p.10).

Spatial Contiguity

Spatial contiguity suggests that animations should be placed in close proximity to the texts that they are meant to illustrate. Research has revealed a moderate median effect for the placement of text and its accompanying animation (Moreno & Mayer, 1999). When text is found at the bottom of the screen, Mayer (2002, p. 95) stated, "Learners must waste limited cognitive capacity in searching for the portion of the animation that corresponds to the presented text."

Visual perception is not like passive cameras, nor does the mind take selective "snapshots" of the world. The key factor which contributes to shaping what we see is sight. It dominates the way we see the world (Daniel Chandler, 1997). We perceive moving objects in real life differently than the way we perceive movement in film, such as motion represented in animation, television, films, computer games or multimedia presentations. This is because the motion isn't moving at all, it's created by displaying a series of consecutively photographed still images in quick succession.

Design Principles

Visual information is a powerful tool in multimedia instructional materials designed for specific needs (Lockee, Moore & Moore, 1999). Multimedia instructional images, designed for a specific need, should be planned with certain design principles in mind. There are three different types of images, the representational (to increase attention and to motivate), anagogic (to promote understanding) and the arbitrary (to illustrate concepts). Their components are: lines, shapes, tones, texture, white space, and boundaries (Gribas, Sykes, & Dorochoff, 1996). The presentation needs to be pleasing, simple, harmonious, and

organized. Reiber (1990) concluded, animated presentations provide clear external illustrations to aid learning in student's ability to visualize complex information.

Design Principles include:

1. Each image represents a single idea or concept in mind.
2. Components of an image have meaning and value to the audience.
3. To design proper instructional images keep in mind the knowledge level and background of the target audience (Lockee, Moore & Moore, 1999).

The Role of Animation in Learning

Today, basic animation is an example of visible motion, were in fact no physical movement of an object actually takes place (Ramachandrat & Anstis, 1986). Animation can be created using inexpensive and easy to use software. In the past animation required mainframe computers with complex software and high skill levels. In the early days of animation, movies were their precursor (Hoban & Ormer, 1950; Reid & MacLennan, 1967). Animation proved superior to slides or sequential photos in presenting time and motion-based concepts (Wells, 1973). There are fundamental application strategies for using animation in a presentation (Rieber, 1990a).

In a study conducted by Baek and Layne (1988) comparing learning from text only, text plus graphics, and text plus animation, the results showed that the adults scored higher in learning from the animation than from either text or graphics. Another study with adult learners found increased scores in the animation group suggesting that animation is more efficient for learning. In addition, animation reduced study time (Mayton, 1991). In evaluating a three part math tutorial, one group used computer animation, another group used the same visuals but in static mode, and the third group used only text. There were

significantly higher scores among the group that used animation and the lowest scores were found in the text-only group (Szabo & Poohkay, 1996). Animation has been found effective in producing mental images from verbal explanations. It aids in the process of learning difficult or new and unfamiliar information. The use of images and animations makes it easier to conceptualize the information (Beerman, 1996). Researchers have also shown that students who used multimedia as a learning tool demonstrated an increased a sense of control and higher levels of motivation. Students in a computer course identified computer simulations as being helpful in understanding concepts (George & Sleeth, 1996a).

Text and Animated Graphics

In Baek and Layne's (1988) study three learning formats were used: (1) text alone, (2) text with simple still graphics, or (3) text with simple animated graphics. The result of this study found that students in the text with animated graphics group recorded higher learning levels than whose with text alone or text with still graphics. The researchers concluded that comprehension may have been improved because of the motion in the animated graphics format.

Baek and Layne (1988) also found text alone did not perform as well as text with still graphics. The simple still graphics may have provided a structure or clustering of the information that helped the students to organize the information. Learning improved with animated and still graphics and the results were consistent with the previous suggestion that pictures may encourage elaborative processing of textual information (Rieber, 1989, 1990)

Chapter 3

Methodology

The Sample

In this thesis project the experimental population consisted of undergraduate students at Kutztown University of Pennsylvania, who were enrolled in the course Introduction to Speech Communication. This course was chosen because it is required of all students regardless of academic major, yielding a cross-section of undergraduates. The final sample consisted of 102 participants, two of whom were excluded from data analysis for failure to complete the survey. The 51 males and 49 females in the final sample had an average age of 23.

The Instruments

To examine the role of textual reinforcement in enhancing comprehension and recall in a video presentation, the instructor produced a three-minute animated mystery. One control version contained only audio and visual images, without text. The second experimental version was identical to the first except for the addition of text to reinforce key elements of the plot (See Appendices A, B and C for Treatment, Storyboard, Script).

Once the two video versions were produced and burned to DVDs, a 14-item questionnaire was developed to measure recall of factual information and comprehension of the plot of the video presentation (See Appendix D).

Procedures

Six classes of Introduction to Speech Communication were randomly assigned to either the experimental (textual reinforcement) or control (audio and video only) group. Both groups viewed the animation on the same equipment, a 30 inch CRT monitor and a Sony DVD Player. Due to scheduling problems, one of the 6 classes viewed the presentation on a similar CRT monitor, but fed from a VHS tape copied from the DVD master.

The study was conducted during a two month period (February& March 2007). Prior to conducting the experiment, a pilot study was conducted by presenting the video in a Speech Communication class not part of the sample. Changes were made to the video following the pilot study based upon technical concerns and audience reaction.

Data Analysis

Data were coded using a prepared coding sheet (See Appendix E). A *t*-test was used to compare the retention and comprehension scores between the experimental and control groups.

Chapter 4

Findings

The findings demonstrated a highly significant increase in retention by the experimental group (text + animation) compared to the control group (animation only). The experimental group scored an average of 83% correct responses compared to 75% for the control group, t (98) = 2.59, p = .01 (see Table 1).

When measuring for comprehension, however, the control group actually scored higher than the experimental group, averaging 30% on the comprehension index compared to 24% for the experimental group. This difference was interesting, but not statistically significant, t (98) = -.74, p = .46.

In examining retention by gender, female subjects scored slightly higher than male subjects, averaging 80% to 78% for the male subjects (see Table 2). This difference was not statistically significant, t (97) = -.83, p = .41. Male subjects scored slightly higher on comprehension than the females, however this difference was also not significant, t (97) = 1.30, p = .20.

Table 1.

Retention and Comprehension by Group

	group	N	Mean	Std. Deviation
Average Retention	Experimental	51	.8235	.14912
	Control	49	.7510	.12930
Average Comprehension	Experimental	51	.2353	.40439
	Control	49	.2959	.40721

Table 2.

Retention and Comprehension by Gender

	sex	N	Mean	Std. Deviation
Average Retention	Male	50	.7780	.15292
	Female	49	.8020	.13306
Average Comprehension	Male	50	.3200	.42570
	Female	49	.2143	.38188

Chapter 5

Discussion

This study investigated the effects of textual reinforcement on an audience's comprehension and retention of plot elements in a short, animated mystery presented on video. The literature suggested that textual reinforcement of key plot elements in an animation would increase retention and comprehension.

The findings supported the premise that textual reinforcement of audio and visual elements would increase retention, with the experimental group scoring significantly higher on the retention measures. The same was not true, however for comprehension. The measurement for comprehension was two questions on a survey relating to the viewer's ability to "solve the mystery" from the content of the video.

For these questions the control group (audio and visual only, without textual reinforcement) actually scored slightly higher than the experimental group which saw the same video with added text. This relationship was not significant, however.

These findings may have related to the short length of the video and the lack of repetition. The literature suggests that multiple impressions may be required for viewers to achieve comprehension of the content of video programming.

The complexity of the plot may also have contributed to these findings.

Recommendations for Further Research

Further research with other types of visual content, perhaps including full motion video and non-plotted informational programming should be conducted, and provisions for

repetition of the content should be made to determine the role textual reinforcement may play in comprehension.

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Appendix A

Treatment

Treatment

Title: "The Mystery of the Fish Fry," a textually reinforced, animated video production

Production Purpose:

Research has shown textually reinforced, animated video productions in the field of multimedia learning can increase a learner's comprehension and retention.

Target Audience

The participants in the sample were students at Kutztown University of Pennsylvania enrolled in Introduction to Speech Communication.

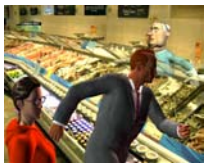
Production Procedures:

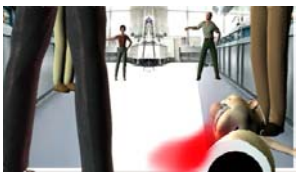
Audio, sound effects and dialog were recorded and mixed down at J. Byrd Production Studio and put on a CD-master. The video material was created using a multimedia platform of software: *Poser, Photoshop, Steinberg Nuendo, Creative Wave, After Effects, Final Cut Pro, MS Word, Power Point, Maya, Ulead Cool 3D, Pro-tools,* and *Photo Elements*. The experimental version of the video was enhanced by adding text to reinforce key plot elements.

Appendix B

Storyboard

Visual Storyboard Development: Animation Layout

Slide1 Storyboard -Mystery 2007 - Judith Williams Thesis/ As a creative visual communication in mass media for Public Television, what effect does a specially enhanced designed multimedia (audio, visual, and text) production have on an audience's recall verse a traditional production  	Slide 2 Mr. & Mrs. fisher, the owners of "Fisher Fish Store" would arrive promptly at 8:30 from Monday to Saturday to open the store for the employee and prepare the store for the day. 	Slide 3 
Slide 4 Mr. & Mrs. De Tectivo arrived at fish store at 8:55 	Slide 5 De Tectivo looks at clock 	Slide 6 
Slide 7 Mrs. Fisher opening up at 9:00 	Slide 8 De Tectivo's followed Mrs. Fisher in to the store 	Slide 9 De Tectivo's think of eating something good for dinner 
Slide 10 De Tectivo's hear arguing and fighting coming form the back room 	Slide 11 Gun shot 	Slide 12 

Slide 13 Mr. Fisher- shot The Cook and Dishwasher yelled, "he went that way" 	Slide 14 De Tectivo runs after the killer 	Slide 15 
Slide 16 De Tectivo, returns and saw no one 	Slide 17 Mrs. De Tectivo, " I think the killer is right here in this room" 	Slide 18 De Tectivo, a Pubic Detective said, I think so, I think, so! 
Slide 19 Dishwasher, 	Slide 20 "I had my I-tunes on and was washing dishes" 	Slide 21 Fish Cleaner 
Slide 22 "I was in the back room cleaning fish" 	Slide 23 Clam Cleaner 	Slide 24 "I got here early and saw Mr. Fisher come in with a large man dressed in black. Then I heard them begin to argue and the next thing, I know while I was shucking clams was a bang, then I seen him run out the back door" 

Slide 25 Cook 	Slide 26 Unpocko, No English 	Slide 27 
Slide 28 Detective De Tectivo 	Slide 29 Mrs. De Tectivo 	Slide 30 Mrs. Fisher 
Slide 31 Fish Cleaner 	Slide 32 Dishwasher, 	Slide 33 Clam Cleaner 
Slide 34 Cook 	Slide 35 Closing 	Slide 36

Appendix C

Script

Title: "The Mystery of the Fish Fry"
Writing, Graphics and Animation by: Judith Williams (2007).
Co-Writer/Narrator: Lydia Douglass

VIDEO	**TIME**	**AUDIO**
1.1. FADE UP FROM BLACK DISSOLVE TO TITLE		FIRST MUSICAL PIECE
1.2. DISSOVE FROM BLACK TO FISHER'S DRIVING MR. & MRS. FISHER,		FADE OUT MUSIC FADE IN NARRATION: "*Mr. & Mrs. Fisher*, the owners of the local fish store, arrives to work in their off white station wagon promptly at 8:30am every day, expect Sundays. 'Do you have the keys hon", said **Mr. Fisher** "No you have the keys," said **Mrs. Fisher** "Oh, yes my pet, they're in my pocket," said **Mr. Fisher**
1.3. FADE TO FISHER'S ENTERING THE STORE		
1.4. DISSOLVE TO THE DE'TECTIVO (FIRST CUMSTERM AT FISH STORE)		NARRATION: "The first customers of the day were Mr. & Mrs. De'Tectivo. They owned a family detective agency from the upper north side"

1.5.
DISSOLVE TO THE CLOCK

NARRATION: "Mr. De'Tectivo turned the old crystal door knob to enter the store, it didn't budge. The store wasn't open yet. They looked at the red and black sign which posted the hours in the window. It said the store's hours are from 9:00am - 5:00pm daily. They looked at the gilled clock above the blue wooden six pain glass door. It was only 8:55am. So they decided to wait. They took in the site of the large welcome sign of a crab caught in a fish net in the left window, and the seven fish hanging in the right window."

1.6.
DISSOLVE TO MRS. FISHER

MRS. FISHER OPENING UP AT 9:00

NARRATION: "The clock's chimes sounded and Mrs. Fisher promptly opened the front door to welcome them in. They followed her into the store."

1.7.
DISSOLVE TO DE 'TECTIVO'S MRS. FISHER IN TO THE STORE

DE TECTIVO'S FOLLOWED MRS. FISHER IN TO THE STORE

1.8.
DISSOLVE TO DE 'TECTIVO'S

NARRATION: "The De'Tectivo dreamed of the delicious meal they would have tonight possibly steak and lobster while relaxing in their cozy slippers in front of the fireplace.

They heard shouting coming form the back room. Mr. & Mrs. De'Tectivo glanced at each other as if to say what's going on.
Mr. De'Tectivo thought "Mrs. Fisher must be deaf," The more they tried to focus on a choice for dinner, the louder the arguing grew."

1.9.
DISSOLVE TO
DE 'TECTIVO'S TURNING

1.10.FADE TO BLACK
GUN SHOT

SOUND EFFECT-GUN SHOOT , CRASHING

GLASS, MOUNING, YELLING

1.11.
DISSOLVE TO DE
TECTIVO'S
LEAPS IN TO ACTION

NARRATION: *"Mr. De'Tectivo* leaped into action and ran to the back room and there was Mr. Fisher lying on the floor. He had been shot."

1.12.
DISSOLVE TO
MR. FISHER- SHOT
THE COOK AND
DISHWASHER YELLED,

THE COOK ,"he went that way"

DISHWASHER, "he's out the back door."

1.13.
DISSOLVE TO
DE'TECTIVO RUNS
AFTER THE KILLER

NARRATION: *Mr. De'Tectivo* ran through the fish room and out into the alley.
In seconds, he returned and said, "I did see anyone".

SOUND EFFECT: a small whimper from Mrs. Fisher, the room was quietly still.

1.14.
DISSOLVE TO
DE'TECTIVO, RETURNS

1.15. DISSOLVE TO MRS. DE'TECTIVO,	MRS. DE TECTIVO, “ I think the killer is right here in this room”
1.16. DISSOLVE TO DE'TECTIVO, A PUBIC DE'TECTIVE SAID,	MR. DE 'TECTIVO, "I think so, I think, so!"
1.17. DISSOLVE TO DISHWASHER	DISHWASHER, “I had my I-tunes on and was washing dishes”
1.18. DISSOLVE TO DISHWASHER	DISHWASHER, “I was in the back room cleaning fish.”
1.19. DISSOLVE TO CLAM CLEANER	CLAM CLEANER, "I got here early and saw Mr. fisher come in with a large man dressed in black. Then I heard them begin to argue and the next thing, I know while I was shucking clams was a bang, then I seen him run out the back door.”
1.20. DISSOLVE TO COOK	COOK , "UNPOCKO, NO ENGLISH"

1.21.
FADE TO BLACK
FADE IN SPOT LIGHT
SLIDE

NARRITIONA, " who do you think is the killer,"

1.22.
DISSOLVE TO
DETECTIVE DE'TECTIVO

SOUND EFFECTS: HEART BEAT

1.23.
DISSOLVE TO
MRS. DE'TECTIVO

1.24.
DISSOLVE TO
MRS. FISHER

1.25.
DISSOLVE TO
FISH CLEANER

1.26.
DISSOLVE TO
DISHWASHER,

1.27.
DISSOLVE TO
CLAM CLEANER

1.28.
DISSOLVE TO
COOK

1.29. DISSOLVE TO
SPOTLIGHT
CLOSING

1.30.
FADE TO BLACK

SOUND EFFECT FADE OUT

Appendix D

Test Instrument

A Comparative Evaluation Thesis Questionnaire
Department of Electronic Media
Kutztown University, Kutztown Pennsylvania
2/2/2007

After viewing the short video presentation, please **CIRCLE** the correct answer to each question.

Participation in this survey is **NOT** a requirement of this course; however it will be most appreciated. Do not identify yourself in any way on this form. All responses will remain confidential.

1. The Fish Cleaner said, "I was in the backroom ___."

   a. Sweeping the floor
   b. Splitting crabs
   c. Scaling fish
   d. Steaming fish

2. There were ___ fish hanging in the ___ window

   a. Six- right
   b. Six - left
   c. Seven -left
   d. Seven -right

3. They took in the site of the large welcome sign of a crab caught in a fish net in the ___ window.

   a. Right
   b. Left

4. The ___ **shouted**, "He went that way." while pointing to the fish room.

   a. Dishwasher
   b. Cook
   c. Clam Cleaner
   d. Fish Cleaner

5. Mr. De'Tectivo ___ into action and ran to the back room and there was Mr. Fisher lying on the floor.

   a. Leaped
   b. Jumped
   c. Fly
   d. Soared

6. The Dishwasher shouted I didn't hear a thing; I was washing dishes and ___.

a. Watching TVR
b. Listening to *I*-tunes
c. Listening to the radio
d. Watching my *I*-pod

7. The De'Tectivo's dreamed of the delicious meal they would have tonight, possibly ___, while relaxing in their cozy slippers in front of the fireplace

a. Chips and Lobster
b. Alskan Crab and shimp
c. Shimp and chips
d. Steak and Lobster

8. Mr. & Mrs. Fisher, the owners of the local fish store, arrive to work in their ___ promptly at 8:30am every day, expect Sundays.

a. Car
b. White car
c. Off white car
d. Off white car with red trim

9. They looked at the ___ sign which posted the hours in the window.

a. Red and orange
b. Red and black
c. Black and orange
d. Black and white

10. Mr. De'Tectivo turned the ___ door knob to enter the store. It didn't budge.

a. Old crystal
b. Old wooden
c. Old metal
d. Old brass

11. I think ___ is the killer and hid the gun is in ___.

a. the Cook – the food
b. the Dishwasher – the sink
c. the Clam Cleaner – the clams
d. the Fish Cleaner – a fish
e. Mrs. Fisher – her pocket
f. Mr. De'Tectivo – the alley
g. Mrs. De'Tectivo – her handbag

12. I think ___.

a. The Fish Cleaner, Clam Cleaner, Cook and Dishwasher are all involved but the Fish Cleaner is the killer and the gun is in a fish.

b. The Fish Cleaner, Clam Cleaner, Cook and Dishwasher are all involved but the Dishwasher is the killer and the gun is in the sink of dishes.

c. The Fish Cleaner, Clam Cleaner, Cook and Dishwasher are all involved but the Clam Cleaner is the killer and the gun is in under the clams.

d. The Fish Cleaner, Clam Cleaner, Cook and Dishwasher are all involved but the Cook is the killer and the gun is in the pot of food.

13. Please circle the appropriate response for your gender.

a. Male
b. Female

14. Please circle the appropriate response for your class rank.

a. Freshman
b. Sophomore
c. Junior
d. Senior