History textbooks: modifying so that each deaf student may learn with ease

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History Textbooks: Modifying So That Each Deaf Student May Learn with Ease

MSSE Master’s Project

Submitted to the Faculty Of the Master of Science Program in Secondary Education Of Students who are Deaf or Hard of Hearing

National Technical Institute for the Deaf ROCHESTER INSTITUTE OF TECHNOLOGY

By

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Student Signature

In Partial Fulfillment of the Requirements For the Degree of Master of Science

Rochester, New York ________________ (date)

Approved: ____________________________

Project Advisor

________________________________________________________________________________________

MSSE Program Director
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Abstract

The general goal for this project was to demonstrate how to modify history textbooks for the subject area of Social Studies. My experiences at internships recognized needs at the middle school level to have revised textbooks for students of normal intelligences but below-grade-level reading skills. However, practical problems obtaining a sample of children at the middle school level prevented me from demonstrating the problem or the solution at that level. So the goal of this project was to illustrate the process and the potential positive outcomes by using first-year college students instead. I expected the benefits to be similar at other age levels.

The modified texts were based on literature reviews to support this project. The literature review topics covered learning English as a second language, strategies in reading by deaf learners, and deconstruction of the language of history textbooks. The method processes included giving out series of non-modified and modified, reading passages, worksheets to test their comprehension, and attitude survey. The result showed that some participants performed better with Modified Texts and in the attitude survey, the results showed higher and positive responses for Modified Text when compared to Original Text.
History Textbooks: Modifying So That Each Deaf Student May Learn with Ease

During my internship at Maryland School for the Deaf, Frederick, and California School for the Deaf, Fremont, I taught Social Studies students in grades 6 through 8. There was something that struck me odd and that is, both of the schools are over a hundred years old and there are no appropriate history textbooks for deaf learners who have low reading skills with high interest. In other terms, those students have capacities in comprehending abstract ideas but are unable to read English well.

When reading a history textbook, those students whose reading levels are at grade level would receive them well and those students who are below grade level will not receive the same type of rich information, despite using the same material. Generally, in remedying this dilemma, according to Williams (2003), teachers tend to simplify the information to accommodate to those students with low reading levels. The results I’ve seen during my internship do not sit well with me because those struggling readers lose information when they should not lose any at all.

Often the teacher of the deaf translates complicated texts into visual communication rather than having the students actually read it themselves (Mayer, 1996). This is what I call a spoon-feeding method that develops dependency in those students. Strassman (1997) has mentioned that Deaf learners have poor metacognition skills and they are dependent learners and spoon-feeding does just that. I strongly feel that modifications of the textbook will enrich those below-grade-level students with information, ideas, and facts and increase their coding, learning, and independence.
It is imperative to motivate deaf students with low reading/ high interest to develop the skill to read on their own. We cannot expect a reader to enjoy a book that makes no sense. According to Chan (2003), modified readings motivate students to read. We can increase their motivation by using Modified Texts, which will enrich their history knowledge, and at the same time, they will actually enjoy reading. The students will increase in skill when reading material that fits their reading level. They will not stop there; they will continue to scaffold their interest, their motivation, and even confidence in reading history texts and hopefully explore more challenging reading materials on their own (Golladay, 1977). When they become confident in reading, they will be less dependent on teachers to translate the history textbooks.

I hope my project promoted my goal to encourage teachers to develop modified textbooks for their students. With my literature review as a support to find accurate information on how to modify history textbooks with specific guidelines, it might help them to know what to look for and what to avoid when modifying a history textbook. I aspire for my project to be a guideline for teachers when they attempt to modify history textbooks for those deserving and capable Deaf learners.

Literature Review

Frequently research studies raised our awareness that the deaf learner’s reading test scores have been at a low level on the average of 3rd to 4th grade (Traxler, 2000). Mayer and Mosko mentioned that it is due to lack of vocabulary (1998), language barriers (Golladay, 1977) and lack of proper educational method (Walworth, 1990). Also, most of the articles mentioned late language development as accountable for this problem.
Research has shown that teachers and students with or without disabilities often struggle to read history textbooks effectively (Hamiss, 2001). A report done by the National Education Goals Panel (1997) indicated that the student's performance with history textbooks is inadequate. This clearly shows that it is difficult for those students who are proficient with English and harder for those who are already struggling with English.

Schilepppegrell (2004) stated that students who use English as a second language can achieve grade level standards in school subjects while developing English proficiency. The achievements can be done by giving them reading materials that they consider to be at ease reading levels (Golladay, 1977). Relating to Golladay, MacAnally, Rose, and Quigley (1999) supported this and added that using at ease reading materials motivates students to read at a higher level. When they move into the higher level and challenge themselves in the learning process it is called scaffolding.

Schilepppegrell (2004) listed examples of how history textbooks are difficult such as, the frequent use of nominalization, verb confusion, disorganized timeline, and complex sentence structures. Not only did she explain the reasons why textbooks are difficult, she provided guidelines for modifying history textbooks to ease the difficulty for those already struggling students. Also, Berent (2004) mentioned that deaf students would read more smoothly if the subject, verb, and object are in simple S-V-O order.

Using those literature reviews and more, as I intended to continue the exploration on how to modify without reducing the quality, I have developed clear, concise, and accurate guidelines in how to modify history textbooks for Deaf learners who have low reading ability but great achieving potentials. To effectively put my modification to use,
I referred to the Supporting English Acquisition (SEA) site developed by Berent (2005). On that site, Berent (2005) discussed rules in modifying grammar such as, what to look for, what complications to avoid. Complications discussed were conjunctions, nominalizations, and passive statements that can confuse individuals who have difficulty in reading. Also, in that SEA site, specific templates were offered in creating a clear layout in assisting when modifying to improve the readability. Some examples to be incorporated into the layout of the modified text should be active sentences, definitions, charts, pictures and borders (Berent, 2005).

Method

Participants

The selection of participants were to be specific due to one of the variables in the experimental design was familiarity of the topic of the reading passage; therefore, the experimenter partnered with an instructor of a first-year college course, Introduction to Social Sciences, and planned the experiment around the topics presented in that course.

The goal was to form two groups of five subjects from that course; however only four subjects were recruited in Introduction to Social Sciences classes. In order to continue with the study, six more subjects were randomly recruited from the Learning Center at the National Technical Institute for the Deaf, Rochester Institute of Technology in Rochester, New York.

Protocol

The experimenter introduced himself as a student in the Masters degree program at NTID. The experimenter asked the students to volunteer and to participate in this experiment. The participants earned $5 after the experiment. The experimenter explained the purpose of the experiment as described in the consent form (Appendix A). The consent form was
translated into American Sign Language for the students. The subjects signed the consent form to give permission to get their reading test score from the Institute’s data records and to show agreement to participate in the experiment. After collecting the forms, the experimenter gave the first group two Original Texts and a Modified Text to read. The second group read one Original Text, and then read two Modified Texts (Figure 1). After they read the texts, they completed a five-item comprehension test (Appendix B) related to the text. After doing the comprehension sheet, they filled out an attitude survey (Appendix C). The forms were handed out individually in sequence after they completed reading, answering questions, and completing the survey. The students worked individually and they had the reading materials to look at when answering test questions.

Figure 1. Design of the study.

*Introduction to Social Sciences* 0882-200-01/02

<table>
<thead>
<tr>
<th>Group A</th>
<th>Group B</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text 1 Original Text</td>
<td>Text 1 Original Text</td>
<td>1. Shows: Original Text is not at ease reading level.</td>
</tr>
<tr>
<td>Text 2 Original Text</td>
<td>Text 2 Modified Text</td>
<td>2. Shows Modified Text is at ease reading level.</td>
</tr>
<tr>
<td>Text 3 Modified Text</td>
<td>Text 3 Modified Text</td>
<td>3. Shows scores based on Modified Texts alone, not based on teacher’s reinforcement or activities reinforcements</td>
</tr>
</tbody>
</table>

Materials

The textbook used in this experiment was *Social Science: An Introduction to the Study of Society* by Hunt, and written at college level. All of the texts were taken from
this specific book. Some materials were modified and some were left in their original form.

The first material assigned to all participants was Original Text 1 as shown in Appendix D. Both groups began with a passage from the college textbook written at college grade level. The topic of the passage, "The Nature of Our National Government," had already been covered in the Social Sciences course, so the material should have been familiar for the subjects from that course. In this Text 1 (Appendix D), the experimenter made no changes and the text is original from the book.

Both groups received a second passage from the college textbook. The topic of this specific passage was, "Why Our Government Is Both a Democracy and a Republic," and again, that topic had already been covered in the Social Sciences course. The experimenter created two separate texts. One text was Original Text 2 (Appendix E), without any changes, and one text was modified. The Modified Text (Appendix F) was developed in accordance to the guidelines the experimenter developed.

Group A received Original Text of this specific topic; meanwhile Group B received Modified Text. The purpose for two separate groups receiving the same topic but different readability was to evaluate whether Modified Text had better readability scores through the comprehension sheet.

Both groups received a third passage on a topic that was not covered in the Social Sciences course, "A United States of Europe." The passage was modified (Appendix G) for easy reading, keeping the original content of that specific topic. The purpose was to examine whether the modifications were effective, even when encountering unfamiliar materials not covered by the instructor.
Guidelines for Modifying the Reading Passages

The selected passages in the textbook had been modified. The ideas to modify the text were gathered from Second English Acquisition (SEA) webpage (Berent, 2005). The SEA webpage gave extensive examples what and how to look for and what English structures we should avoid. Also, the SEA explained how to change a complex English structure into a simple English structure. The kind of complex statements looked for in the Original Text included nominalization, passive sentences, less frequency used vocabulary, and conjunctions. The English structures that deaf students often face as problems were modified into a simple sentence structure. After modifying the texts, the content had to be similar to the Original Text without distorting or losing information.

A general guideline that the experimenter established to follow:

1. Select the passage
   a. Find what is whole passage’s objective
   b. Look for vocabulary that the students in your class are not familiar with
   c. Look for a sentence that holds several meanings
   d. Look for a passive sentence
   e. Look for sentences with conjunctions or complex sentence structures
2. In the modified draft
   a. Set up a heading of the passage’s objective
   b. Change the structure of sentence that you have selected into a simple S-V-O English structure as described by Berent (2005)
   c. Is your Modified Text similar in information content to Original Text?
3. Show your modified work to someone for feedback
4. Set up the layout
   a. Define vocabulary in simple layman terms
   b. Add a visual chart(s) to aid reader
   c. Add a timeline(s) if needed
   d. Add a heading
   e. Add emphasis to reinforce the objectives of the passage
5. Show your layout of Modified Text for feedback
Attitude Survey

After answering the test questions, the survey (Appendix C) asked the students how they felt about reading Original Text and Modified Text.

Results

Passage Comprehension

There were two groups of subjects. Each group had two different conditions, 1) Original Text and 2) Modified Text. There were three different passages extracted from *Social Science: An Introduction to the Study of Society* by Hunt. Groups A and B read the same Original Text in the first sequence. In the second sequence, Group A had Original Text condition, while Group B had Modified Text condition. In the last sequence of the conditions, both groups read the same Modified Text.

One passage was administered in Original Text condition to both groups to determine their ability to comprehend the information without modifying the text. This was the first part of the experiment. The first test sequence was to show that they both would have same results due to using the same Original Text.

A second passage was administered in Original Text condition to one group, and in Modified Text condition to the other group, to determine if modifications enhanced comprehension. Comparing the results between both groups will help us determine the effects of Modified Text. For instance, if Group B (the ones who read the Modified Text) did better on the comprehension aspect, this would show that the modification indeed had a positive effect.

In the final sequence of the experiment, a third passage was administered in Modified Text condition to both groups to confirm the effect of using a Modified Text.
The results will be used to compare to each other again like when using the first test's results to show that text modifications are effective even with material that has not been taught.

The worksheet was constructed to see if both groups had the same level of comprehension in each condition. The data were collected from a worksheet activity in each condition. On the worksheet, 4 questions were asked in multiple choice format, true and false, and short-answer format (requiring construction of information, based on the passage). On the first four questions, which required lower-level processing, the participants would earn either right or wrong answers. Some specific questions required rubrics such as Worksheet # 2 Item # 3 expected short written answer. The answers were scored based on the rubric (see Appendix H). For all those answers, they were either right or wrong and the data collected were based on the frequencies of the errors and/or correct answers.

The last question, Item 5, on all worksheets required a written response. Those specific questions were scored according to the rubrics (Appendix H & I). There were two different scoring methods. The first method was to score to assign points. Based on points, second method was to decide if the answer was correct or wrong. Correct answer would be received if the student earned 15 or 20 points. The student who scored 10, 5, and 0 received as a wrong answer. For all those answers, they were either right or wrong and the data collected were based on the frequencies of the errors and/or correct answers.

Chi-Square tests were performed to determine if there were differences between groups A and B for Items 1-4 only. These items were grouped together based on similar form of questions and level of simple process thinking. The differences in Group-A-in-
Original-Text-Condition versus Group-A-in-Modified-Text-Condition were collected as well as the differences in Group-B-in-Original-Text-Condition versus Group-B-in-Modified-Text-Condition. As for Item # 5, a different test was performed, called the t-test, to measure the open-ended questions that required written responses. The points were scored through using the rubric described in Appendix I.

Finally, a correlation coefficient was calculated to see the relationship between each participant’s California Reading test scores and the scores on their Items #1 - 5 on the first worksheet (Original Text) results and the relationship between each participant’s California Reading test scores to their Items #1 - 5 in the third worksheet (Modified Text) results. Detailed data for each test are described in the following sections.

Group A vs. Group B

The first question was whether the two groups were similar in reading comprehension, using the college-level passages selected for this study. Both groups read the same original passage in the first test sequence. The number of right and wrong answers on worksheet Items 1-4 were compared in a Chi Square test (see Table 1). The result showed that there was a significant difference, Chi Square (2, N = 40) = 8.286, \( p = .01 \), between the two groups. Group B performed better than Group A on the original passage.
Table 1

Number of Right and Wrong Answers on Items 1 - 4 for Original Text 1 vs Modified Text

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right answer</td>
<td>7</td>
<td>16</td>
<td>23</td>
</tr>
<tr>
<td>Wrong answer</td>
<td>13</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

Original Text vs. Modified Text

The second question was whether Modified Text enhanced comprehension. Because Group B showed better comprehension than Group A in the first test sequence, the two groups could not be combined. Therefore, each group became its own control. Comprehension was checked within each group, separately, comparing Original Text condition against Modified Text condition. The data were taken from the first and third test sequences in which both groups first read the same original passage and then read the same modified passage.

For Group A (see Table 2), the result of the Chi Square test showed there was a significant difference, \( \chi^2 (2, N = 40) = 6.46, p = .025 \). Group A performed better with the Modified Text than with the original passage.
Table 2

**Number of Right and Wrong Answers on Items 1 – 4 for Group A after Reading an Original and a Modified Passage**

<table>
<thead>
<tr>
<th></th>
<th>Original Text 1</th>
<th>Modified Text 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right answer</td>
<td>7</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>Wrong answer</td>
<td>13</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

For Group B (see Table 3) the result showed there was no significant difference, Chi Square (2, N = 40) = .0143, p = .143, between the number of right and wrong scores on the two passages. Group B did well on both kinds of passages.

Table 3

**Number of Right and Wrong Answers on Items 1 – 4 for Group B after Reading an Original and a Modified Passage**

<table>
<thead>
<tr>
<th></th>
<th>Original Text 1</th>
<th>Modified Text 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right answer</td>
<td>16</td>
<td>15</td>
<td>31</td>
</tr>
<tr>
<td>Wrong answer</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>20</td>
<td>40</td>
</tr>
</tbody>
</table>

**Open-ended test Item # 5**

The third question of this experiment was whether text modifications affected performance on an open-ended test item (Item # 5). The 5th question was open-ended and required higher order process thinking. This Item # 5 required the reader to use abstract thinking to answer the question. The answers were scored numerically by using a rubric
sheet. A well-written answer received full 20 points. Fewer points were given if a subject included fewer and inadequate concepts in the answer. An unpaired t-test was performed to compare the groups.

In the first test sequence, both Group A and Group B read Original Text without reading any Modified Text. The results of the t-test on the group scores did not show a significant difference, \((M = 9.5, SD = 3.54), t(4) = 0.8485, p = .4208\) (two-tailed), \(d = 8\) when answering Item # 5. Both of the groups performed almost same on this first, Original passage (see Table 4).

Table 4

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean Score</strong></td>
<td>11.00</td>
<td>8.00</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>6.52</td>
<td>4.47</td>
</tr>
<tr>
<td><strong>SEM</strong></td>
<td>2.92</td>
<td>2.00</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

On the second test, Group A had Original Text condition and the Group B had the Modified Text condition. The Modified Text contents were based on Original Text, thus the questions did not differ. The t-test unpaired showed there was a significant difference \((M = 14, SD = 3.391), t(4) = 3.5386, p = .0076\) (two-tailed), \(d = 8\), between Groups A and B on Item 5. Group B (Modified Text) performed better than Group A (Original Text). See Table 5.
In the third test sequence, both of the groups read a Modified Text on a topic that was not taught in the course. The purpose was to see if the students were able to independently do well on their own without having supports during class when reading unfamiliar Modified Text although not all students were enrolled in the course. A comparison of the groups showed that their scores on Item 5 were not statistically significantly different ($M = 12.5$, $SD = 4.690$), $t(4) = 0.6396$, $p = .5403$ (two-tailed), $d = 8$. Therefore both of the groups achieved a similar outcome on item #5 (see Table 6).

Table 6

<table>
<thead>
<tr>
<th>Group</th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>11.00</td>
<td>14.00</td>
</tr>
<tr>
<td>SD</td>
<td>5.48</td>
<td>8.94</td>
</tr>
<tr>
<td>SEM</td>
<td>2.45</td>
<td>4.00</td>
</tr>
<tr>
<td>N</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>
Relation Between Reading Level and Comprehension of Modified Texts

When handing out the consent form to participate in the experiment, the subjects signed the form to allow the experimenter to collect their California Reading test scores. The subjects took the California Reading test when they entered NTID. The purpose for examining the California Reading test scores was to see if there was any correlation between their Reading scores and their abilities in answering Items #1-5 on the comprehension test for two separate sets of texts (Original Text versus Modified Text).

On the first worksheet with the Original Text, the correlation coefficient test was performed and it showed low relationship \( r = 0.35 \) between the participant California Reading test score and their performance on Original Text 1, Items #1-5 (see Figure 2). Therefore, this shows that the level of Original Text was difficult for the participants, regardless of their California Reading test scores.

Figure 2

Correlation between subjects’ California Reading test Score and Score on Items 1 - 5, worksheet 1 (Original Text 1)
On the third worksheet with Modified Text, the correlation coefficient test was performed and it showed a higher relationship between the California Reading test score and performance on Modified Text 3 \( r = .62 \) (see Figure 3). This says that with Modified Text, the correlation between higher Reading scores and the participant's ability to comprehend the worksheet. The result indicates that the Modified Text 3 was closer to an "at ease level" and the participants were able to show better performance.

Figure 3

Correlation between Subjects' California Reading test Score and Score on Items 1 - 5, worksheet 3 (Modified Text 3)

Attitude Survey

An Attitude Survey was administered to each group after the comprehension worksheet in each condition. The survey was to collect information about the subject's attitude when reading Original and Modified passages. The survey (see Appendix C) used multiple choice and expected written short answers to determine how much the
subjects thought they understood, how much they enjoyed reading the passage, and how much they thought they needed help with reading materials.

The responses to Items 1 to 4 on the Attitude Survey were scored as a positive or a negative. Each Item was scored differently (see Appendix J):

Item # 1

When the subject picked A or B, indicating the most confidence, that counted as a positive. When the subject choose C, D or E, indicating the least confidence, that counted as a negative.

Item # 2

When the subject picked A, indicating the most confidence, that counted as a positive. When the subject chose B or C, indicating less confidence, that counted as a negative.

Item # 3

When the subject picked A or B, indicating the least independence (indicates that s/he needed help when reading), that counted as a negative. When the subject chose C, indicating the most independent ability in reading, that counted as a positive.

Item # 4

This item required open-ended responses and the scores were tallied through using the rubrics. According to the rubrics (Appendix J), those who scored above 75% were counted as a positive; meanwhile those who scored below 75% were counted as a negative.

The number of positive responses and negative responses were counted after reading the original passages. This procedure was done the same for all of Modified
Texts. The numbers of positive and negative responses in each condition were entered into a frequency table as shown in Table 9 collapsing across groups.

The Chi-Square statistic showed a significant difference, Chi Square \((2, N = 80) = 5.21, p = .025\). The subjects showed more positive attitude responses when reading Modified Texts than when reading Original Texts.

Table 9

<table>
<thead>
<tr>
<th>Number of Positive and Negative Responses on Items 1 – 4 of an Attitude Survey after Reading Original or Modified Texts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Positive</td>
</tr>
<tr>
<td>Negative</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Subjects' Written Comments about the Reading Task

Students wrote several kinds of comments on the final item on the Attitude Survey. To present a few, students expressed more frustrations when they tried to comprehend Original Texts. For instance, subject 3 wrote, “...it was difficult to get the right answer at the same time try to understand it. There are some words that I don’t know what it means.”

They were not able to understand Original Texts due to some of the vocabulary that they were not aware of. Some students expressed their inability to understand what the passages’ messages were about. A few students felt that Original Texts were at their normal level and some found it stimulating and challenging.

Most of the students expressed more confidence when reading Modified Texts. They expressed more positive reactions to Modified Texts. To present a clear difference,
that same subject 3 wrote, "I feel fine and confident, because I learn something good in
the system." Some students felt they were able to do well on Modified Texts and able to
respond more fully on the worksheet. Aside from the tremendous positive responses,
some of the students felt that Modified Texts felt like reading a "kid's work."

Discussion

In the data, differences between the groups showed a variety of need for modified
text. Group B performed better than Group A in the Original Text condition, as a result, it
was difficult to show an effect of the modified text with Group B, although both groups
had the same mean reading level (8th grade). Some of the questions showed the same type
of errors in both groups. This may indicate that the questions were not clear or that
Modified Texts may have lost some of the information from Original Text.

Overall, despite several flaws in this experiment, the result showed positive
outcomes. The result showed that some participants performed better with Modified
Texts and the attitude survey showed higher and positive responses when compared to
reading Original Text.

This project turned out to have surprising results that need further investigation.
The Modified Texts showed better performance and better attitude responses than
Original Texts. However there are several things that might have confounded the
research. There were flaws in method process, and flaws when developing Modified
Texts and, creating questionnaires. The attitude survey apparently had problems as well.
Those flaws and students' responses will be discussed in the following paragraphs.

There were only ten subjects that participated in this experiment. The number of
this experiment resulted in small amount of data to find if Modified Texts actually
performed better than Original Texts. Only 4 participants were from Sociology Science class and the remaining students were randomly selected at NLC (NTID Learning Center). Some of the subjects from NLC were not familiar with the government system. Two of the subjects expressed that they did not know United States of America’s government system because they lived in a different country and could not relate to it.

The process of creating Modified Texts was time consuming when trying to manipulate without distorting the information. The experimenter spent many hours on each sentence in the Original College level text. Perhaps when doing an 8th grade textbook, it would be less time consuming. The process of modifying requires a person who is skilled in English to master this kind of procedure.

Developing a layout for Modified Text with definitions, charts, visual pictures, timelines, emphasis, and headings was also time consuming when setting up a new template for the first time. Another obstacle in designing a template would be not having the appropriate software for creating one. When using InDesign, an Adobe layout product, it was easy to use and manipulate the layouts with basic skills.

Another difficulty is that the Original Text may take up a whole space of a legal sized page and it was difficult to squeeze in a page with definitions, pictures and other designing templates. After setting up an aesthetically designed layout, it is important for the reader to have a comfortable layout that is easy to follow. That requires skills and ability in creating a well-developed template.

After developing a Modified Text, the big challenge was to develop questions or to use questions from Original Text that match Modified Text. The Attitude Survey Item # 2 that was developed for this experiment showed some flaws that led some students to
misunderstand. For example, for the question that asked if the students enjoyed the reading materials, there were 3 options with blank lines for the students to fill in explaining their choice of answers. Some students actually wrote answers for each choice, unintentionally saying that they ranged from enjoying as they read it to not enjoying it at all.

The experimenter observed each participant while they took the tests. During the test procedures, some subjects asked the experimenter to define a specific vocabulary word when reading Original Texts. One subject kept repeating that she could not read well and that she was not “smart.” The experimenter also observed that when students worked on the Modified Texts, they did not ask for help and did not display obvious expression of frustration.

The observation is better supported by the actual written responses in the attitude survey where the responses showed that the subjects enjoyed doing Modified Texts more than Original Texts. Their responses were that they were able to do it on their own without supports and able to understand Modified Texts better. Aside from the positive note, a subject expressed concern that Modified Text seemed to lack information and felt like he was doing elementary work.

This experiment was taken at a college level despite the original goal of developing modified historical texts for middle school students. However, the results of this experiment lead to a conclusion that there is a need to create modified history textbooks for students with high interest but low reading levels. The establishment of a specific company or organization to modify history textbooks used by specific schools is needed. The organizations or companies could have a group of members with delegated
responsibilities such as, one subgroup focuses on modifying the grammar, one area could focus on ensuring that there is no loss of content when modifying, meanwhile others could focus on developing a well designed template when creating history textbooks. This may seem like a lot of work but, according to this study’s results, it clearly shows that students who read modified texts benefited from new information, understood new concepts, and enjoyed it while they were at it. Nothing can beat those worthy and rewarding results.
References


Appendix A

Informed Consent

Name of Study: History Textbooks: Modifying So That Each Deaf Student May Learn with Ease.
Investigator: Jason Kulchinsky, Masters of Science in Secondary Education for the Deaf and Heard of Hearing program at RIT/NTID.
Faculty Advisor: Carol De Filippo

Dear Participant:

Thank you for agreeing to participate in this study. Please read this letter and sign the bottom if you understand and agree.

This study is part of a masters thesis at RIT/NTID. The purpose is to gather information about non-modified textbook and modified book.

This study has no known risks or discomforts. Your participation is completely voluntary. You may withdraw from this study at any time, for any reason. There is also no penalty for not participating or withdrawing. The personal benefits of participating include the opportunity to share your opinions and possibly foster teachers to modify textbooks.

The data collected in this study will remain anonymous. No identifiable information will be associated with your opinions. Data will be coded so you cannot be recognized. After this study is completed, the original forms will be destroyed.

If you have questions, you can contact the investigator via email at jsk7895@rit.edu. Also, you may contact his advisor at 585-475-6456 (TTY/Voice) or via email at cdfncp@rit.edu.

This project has been reviewed and approved by the RIT and NTID Institutional Review Boards.

Please check box that you have agreed that:

☐ I have read and/or investigator signed it out loud for me about this form to participate in this study. I agree to participate.

☐ I have given permission to look at my reading level score.

Printed Name: ___________________________ Date: ________________
Signature: ___________________________ Birthdate: ________________
Appendix B

Worksheets 1 - 3 to Measure Students’ Comprehension from Reading Passages Texts 1 – 3

Worksheet 1

“If someone asks us, “What kind of national government do we have?”

1) Our national government is:
   a. democratic, republic, presidential, and federal.
   b. democratic, republic, monarchical, and parliamentary.
   c. dictatorial, oligarchical, presidential, and federal.
   d. dictatorial, oligarchical, monarchical, and parliamentary.

2) Our national government is unitary.
   a. True
   b. False

3) Most of the governments of the world which are:
   a. Federal
   b. Monarchy
   c. Oligarchy
   d. Unitary

4) Would Unitary system works well in USA?

5) Which government systems do you like the best? Why?
Worksheet 2

Why is our government both democratic and republican?

1) Our country is both:
   a. republic and democratic.
   b. republic and federal.
   c. democratic and federal.
   d. democratic and presidential.

2) The United States practices representative democracy.
   a. True
   b. False

3) Write, draw, and label how pure democracy works?

4) Which representative democracy works better in this situation?
   a. Small population, 20 people.
   b. Medium population, 50 people.
   c. Large population, 10 million people.
   d. Largest population, 250 million people.

5) Which do you like better pure democracy or representative democracy? Explain Why?
Worksheet 3

How did European Union start?

1) In 1958, a few western European states worked together to share
   a. economic.
   b. laws.
   c. roads.
   d. currency.

2) European Union allows anyone to join.
   a. True
   b. False

3) The original 6 European countries formed a common economic market were:
   a. Denmark, Greece, Spain, Portugal, Britain and Ireland.
   b. Belgium, France, Italy, Luxembourg, Netherlands, and Germany
   c. Czech Republic, Hungary, Poland, Turkey, and Croatia
   d. Austria, Finland, Sweden, Russia, and Ukraine.

4) European Union's government system is:
   a. Democratic
   b. Republic
   c. Monarchy
   d. Parliamentary

5) The progress of European Union is similar to?
Appendix C

Attitude Surveys #1 – 3 after Worksheets #1 – 3

Survey #1

1. Did you understand information in “if someone asks us, ‘What kind of national government do we have?’”
   a. Yes, I understand everything, 100%
   b. Yes, I understand most, 75%
   c. Yes, I understand some, 50%
   d. Yes I understand a few things, 25%
   e. No, I did not understand anything.

2. Did you enjoy reading “if someone asks us, ‘What kind of national government do we have?’”
   a. Yes, I enjoyed reading it a lot because

   b. Yes, I enjoyed reading it somewhat because

   c. No, I did not enjoy reading it because

3. Do you usually need someone to help you to read your materials for the course?
   a. Yes, I do need a lot of help.
   b. I need help sometimes.
   c. No, I can do it myself.

4. How did you feel about yourself while you read?
Survey # 2

1. Did you understand information in "Why is our government both democratic and republican?"
   a. Yes, I understand everything, 100%
   b. Yes, I understand most, 75%
   c. Yes, I understand some, 50%
   d. Yes I understand a few things, 25%
   e. No, I did not understand anything.

2. Did you enjoy reading "Why is our government both democratic and republican?"
   f. Yes, I enjoyed reading it a lot because ________________________
      ____________________________________________________________.
   g. Yes, I enjoyed reading it somewhat because ______________________
      ____________________________________________________________.
   h. No, I did not enjoy reading it because ___________________________
      ____________________________________________________________.

3. Do you usually need someone to help you to read your materials for the course?
   i. Yes, I do need a lot of help.
   j. I need help sometimes.
   k. No, I can do it myself.

4. How did you feel about yourself while you read?
   ____________________________________________________________.
Survey # 3

1. Did you understand information in “How did European Union Start?”
   a. Yes, I understand everything, 100%
   b. Yes, I understand most, 75%
   c. Yes, I understand some, 50%
   d. Yes I understand a few things, 25%
   e. No, I did not understand anything.

2. Did you enjoy reading “How did European Union Start?”
   f. Yes, I enjoyed reading it a lot because ____________________________
   ____________________________
   ____________________________.
   g. Yes, I enjoyed reading it somewhat because ____________________________
   ____________________________
   ____________________________.
   h. No, I did not enjoy reading it because ____________________________
   ____________________________
   ____________________________.

3. Do you usually need someone to help you to read your materials for the course?
   i. Yes, I do need a lot of help.
   j. I need help sometimes.
   k. No, I can do it myself.

4. How did you feel about yourself while you read?

   ____________________________
If someone asks us, "what kind of national government do we have?", here is a short answer: We could describe our national government with four words: 1) democratic; 2) republican; 3) federal and 4) presidential. Our national government is democratic and is different from dictatorial or oligarchical. Our national government is also republican and not monarchical. Most of the governments in the world are unitary, but our national government is federal. Finally, our national government is presidential, not parliamentary. It is important to know that all the governments of the fifty states have the same basic kinds laws but each state can create its rules or laws and is like a unitary government.
Why is our government both democratic and republican? For many years, people in the United States argued to decide what kind of government we have. To answer the question, our government is both a democracy and a republic. A republic is a government system where the citizens vote to choose the government. The word, "republic" means that the people have the right to choose their own leaders. The word, "republic," is the same to the word, "democracy." There are two different kinds of democracy, and they are 1) representative democracy and 2) pure democracy. Representative democracy is where a person speaks for a group when voting on many different laws. Pure democracy is when each citizen debates and votes on every law. Pure democracy can happen in small communities because there are few people to vote on each law. If there were too many citizens, it will be hard to make a decision and vote on a law. Currently, our national government is called a democracy.
Appendix F
Modified Text 2

Why is our government both democratic and republican?

For many years, people in the United States argued to decide what kind of government we have.

To answer the question, our government is both:

1) democracy
2) republic

In a republic, the citizens vote to choose the government.

The word, republic means that the people have the right to choose their own leaders. In the United States, the word, republic, as the same to the word democracy.

There are two different kinds of democracy, and they are

1) representative democracy
2) pure democracy

Currently, our national government is called a representative democracy.
How did European Union start?

In 1958, a few countries in western Europe got together to discuss having one economic system. Six countries (Belgium, France, Italy, Luxembourg, Netherlands, and Germany) agreed to name their economy system European Community.

In 1967, those six countries became stronger and they invited more countries to their economic system. The countries they invited were: Denmark, Greece, Spain, Portugal, Ireland, and Great Britain. Because those countries got stronger and bigger, the European Community changed their name to Council of Europe.

As the years passed, those 12 countries changed their name again to European Economic Community (EEC).

In 1992, there was a famous moment. The Maastricht Treaty was written. The 12 countries changed their name from EEC to European Union (EU).

EU is a group of countries that have the same money called "currency." At the beginning of the EU, there were 350 million people from twelve different countries.

On May 4, 1994, the European Parliament agreed and voted to add more countries to the EU's membership, going from 12 to 16 countries. They invited Austria, Finland, Norway and Sweden. But the people of Norway voted to not join the EU.

In 1998 the EU had 15 members and included around 371 million people. There are more countries that want to become members of the EU; those countries are Turkey, Malta, Cyprus, the Czech Republic, Hungary, Poland and Slovakia.

However, many people think that the EU will not accept many or all of European countries before the end of the year.

<table>
<thead>
<tr>
<th>Name and year of countries that joined the European Union.</th>
<th>1958</th>
<th>1967</th>
<th>1994</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Italy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luxembourg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Belgium</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• France</td>
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<td></td>
</tr>
<tr>
<td>• Italy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Luxembourg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Netherlands</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Germany</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Denmark</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Greece</td>
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<td></td>
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<td></td>
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<tr>
<td>• Portugal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Ireland</td>
<td></td>
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<td></td>
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<tr>
<td>• Britain</td>
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<td></td>
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<tr>
<td>• Austria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Finland</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Sweden</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
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Appendix H

Rubric for Comprehension Worksheets # 1 - 2

Table 1. Worksheet # 1 Answers

<table>
<thead>
<tr>
<th>Points earned</th>
<th>Counted as Wrong Answer</th>
<th>Counted as Right Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>5. Which government systems do you like the best? Why?</td>
<td>The student did not answer the question.</td>
<td>The student picked a government system without explaining why.</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>20</td>
</tr>
</tbody>
</table>

Table 2. Worksheet # 2 Answers

<table>
<thead>
<tr>
<th>Points earned</th>
<th>Counted as Wrong Answer</th>
<th>Counted as Right Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>3. Write, draw and label how pure democracy works?</td>
<td>The student did not answer the question.</td>
<td>The student wrote, drew, or labeled how pure democracy without explaining how it works.</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>5. Which do you like better pure democracy or representative democracy? Explain why?</td>
<td>The student did not answer the question.</td>
<td>The student picked a government system without explaining why.</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>10</td>
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<td>20</td>
</tr>
</tbody>
</table>
Rubric for Comprehension Worksheet # 3

<table>
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<tr>
<th>Points earned</th>
<th>Counted as Wrong Answer</th>
<th>Counted as Right Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>The student did not answer the question.</td>
<td>The student puts either “yes” or “no” and described brief by without explaining why.</td>
</tr>
<tr>
<td>5</td>
<td>The student puts either “yes” or “no” without explaining why.</td>
<td>The student puts either “yes” or “no” both with a weak support.</td>
</tr>
<tr>
<td>10</td>
<td>The student puts either “yes” or “no” and described brief by without supporting evidence.</td>
<td>The student puts either “yes” or “no” with a good support.</td>
</tr>
</tbody>
</table>

5. Do you think that the European Union will stay big and strong? Explain your answer.
## Appendix J

### Rubric for Attitude Surveys

<table>
<thead>
<tr>
<th>Points earned</th>
<th>Counted as Negative Answer</th>
<th>Counted as Positive Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Did you understand information in “x”</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. No, I did not understand anything</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>D. Yes, I understand a few things.</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>C. Yes, I understand some.</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>B. Yes, I understand most.</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>A. Yes, I understand everything.</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Points earned</th>
<th>Counted as Negative Answer</th>
<th>Counted as Positive Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2. Did you enjoy reading “x”</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. No I did not enjoy reading it because...</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>B. Yes, I enjoyed reading it somewhat because...</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>A. Yes, I enjoyed reading it a lot because...</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Points earned</th>
<th>Counted as Negative Answer</th>
<th>Counted as Positive Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3. Do you usually need someone to help you to read your materials for the course?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Yes, I do need a lot of help.</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>B. I need help sometimes.</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>C. No, I can do it myself.</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Points earned</th>
<th>Counted as Negative Answer</th>
<th>Counted as Positive Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. How did you feel about yourself while you read?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using negative words to describe (lousy, frustrated, no confidence)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Using mediocre words with strong negative feeling (it was okay but I feel no confidence, feel like kid )</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Using mediocre words with weak negative feeling. (I feel okay when reading but little understanding)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Using mediocre positive words. (alright, okay)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Using strong positive words (great, wonderful, good.)</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>