Using Pictures as a Mnemonic Device to Learn the Reference and Main Phrase of Scripture Mastery Passages.

Background:
As stated in my previous design your own research assignment we as seminary instructors have been given a main directive from leadership of the Church of Jesus Christ of Latter-day Saints, “We are to emphasize the mastery of key scriptural passages and help students understand and explain the doctrines and principles contained in those passages.” (Teaching Emphasis, CES, 2003) Which means we are to help the students to:

- Learn the references so they can turn to the passages when needed.
- Understand the passages.
- Apply the principles and doctrines in the passages to their own lives.

In the first of these two projects I researched a problem with helping students to memorize a whole scripture verse. In this research and question I wanted to focus on the first of the three bullets above. Memorization of the complete verse applies to the bottom two bullets, so in order to meet all points of the directive I wanted to research how using mnemonics the students could, “learn the references so they can turn to the passages when needed.”

Because seminary is a voluntary course and its accompanying grade it not tied to the students GPA, we as seminary teachers must find a way to motivate student to want to memorize the scriptures and their references. Intrinsically we must help the student want to know the scriptures and also make learning, in this case memorizing the reference, a pleasant enough of experience that they will want to learn more. In my quest to find ways to motivate and help students to memorize the references, I have collect several means, all mnemonic, to help them learn the references. The seminary curriculum covers one book of scripture on a four-year rotation. For the years of the Doctrine and Covenants and New Testament, I have mnemonic rhymes to learn the references and for the Old Testament and Book of Mormon I have picture illustrations that are to help the students to remember the reference and main subject of the scripture.

My problem:
After teaching the four year rotation, I am not sure which way either by the use of rhymes or the illustrations which serves as the most effective means of long-term recall of the references and being able to find them in the scripture when they need to use the material in real-life situations, whether in teaching or in missionary service. It takes considerable more class time to teach the reference and main jest of the scriptures using the illustrations. When using the rhymes the students grow tired faster, and put less work into trying to learn the references. I need to know which way will give me more results for the class time that I spend in learning the references. I need to pick on way that will be most beneficial to all of my students as a whole and increase the chances of their learning of the references.

My Hypothesis:
When students use visual illustrations or pictures to learn the main phrase and reference, it creates more memory ‘hooks’ or ‘pegs’, (Rum nell, 2003) that result in greater chances
for long-term memory recall than by using mnemonic rhymes with key words and reference books and chapters.

**My Research Question:**
Does learning the scripture mastery references and main phrases by using visual illustrations increase the probability that student will be more likely to recall the references of scripture mastery passages than by using mnemonic rhymes with the keywords and references?

**Parameters of the Research:**
I want to help them to learn the references, they must know the references if they want to use them in real-life situations. I want to know how to increase the probability they will remember a scripture that they might use and apply it to the real-life situation when they need it. Also, it take much more time to learn the references by using the visual illustrations and I want to know if it is worth my time to try to ‘sell’ the idea of learning scripture mastery passages by pictures. Also, it takes considerable amount of time to develop the illustrations and make sure they are designed in such a way that it ‘fits’ the pattern of memory building of as many students as possible.

**Main terms used in the study:**
*Scripture Mastery:* 100 scriptures taught to all seminary student from the four standard-works of the church ie: Old Testament, New Testament, Book of Mormon, and Doctrine and Covenants.

*Reference and Main Phrase:* The reference consists of a scriptural book, chapter, and verse so that it can be located using the organization design of the LDS scriptures. Example: 2 Nephi 2:27; 2 Nephi (book), 2:(chapter), :27(verse). With its accompanying main phrase as indicated on a scripture mastery bookmark provided to each of the student. Example: “Men are free to choose liberty and captivity”.

*Long-term recall:* The definition in this study would be being able to find the reference in the scripture with 95% accuracy within 1 week of initial exposure, and 75% for all 25 at the end of a school year.

**Stating the assumptions:**
I think that using visual aids rather than textual rhymes will fit more learning styles across the seminary student population. I make this assumption due to finding in my research and also considering the media savvy nature of the student, who spend a majority of their leisure time in visual stimulation. (ie: video games, movies, and television.)

**Measuring:**
In designing this research I want to collect two things that will require quantitative data and qualitative data. I want to know which method the students have better recall with. I also want to know which way they enjoyed learning the material with, which method they felt best fit their learning style. Knowing both helps me consider which way best
will help me meet the directive above and also to help them enjoy the process of learning, and if there is a big enough push for one method or the other I will compare scores from the findings to decide which method would be best to use.

Part 2: Literary Review:


**Overview:** Article discusses two experiments done with college student. They were asked to read information regarding the history of human intelligence. The students were broken up into 2 groups each with difference instructional conditions to master the reading, including names and dates. Group #1 was mnemonic, where keywords for intelligence theorists’ names and line drawings linking the theorists and their contributions were provided. Group #2 was given free study, where they were asked to study in the best method possible for them to learn the material. In both experiments, mnemonic participants remembered more names and contributions than did free-study group. They were able to remember them significantly more on a week delayed matching test and in written essays. This article was extremely helpful because it used similar techniques to what I had tried to implement into my seminary classes this year. Giving a little bit of literary backing to what I tried to do this year!


**Overview:** This article looks at the how students organize information to try to memorize it. The students were comprised of third, fourth, and fifth graders, they were initially tested with a computer program to see how well they could see different words, sort them in some way which they could manipulate them, and then were tested on which words they were shown. After the initial test the researcher organized the groups of ‘strategic’ and ‘non-strategic’ and analyzed how they organized the words they were to memorize. They did this to see how student used mnemonic sorting principles without being taught them. Then the strategic and non-strategic student were divided into groups and given instruction. Group one was given the sort-instruction and the other metamemory instruction. The first group was asked to sort the words by definition or the function of the word. The metamemory group was given instructions on how to organize the words into groups and instructed on ways to memorize them using the lists. As they did the instructions they were asked to give self-tests on repeated basis, to practice remembering. They were then tested a week later on the same words. They metamemory group remember them on a much higher level. The author made a case based on the significance to findings that students should be taught mnemonic strategies from the beginning as to aid the recall and building of memory in students.

Overview: Article contains brief overview of mnemonic strategies and common usage for mnemonic devices. The article argues that mnemonic devices enhance learning and retention of material. The article explains that long term memory is organized in terms of schemata, which means that the information is stored into a framework to which we place our experiences; and the trouble we have is not remembering things, but it is retrieving it from memory when we need it. The article them claims that using mnemonics it places the information in a way that it can be easily retrieved. In summary, the jest of the article is that if you use mnemonics to remember something, you are placing things in order in the schemata of your memory in such a way you are increasing the chances of remember it.


Overview: In this article it discusses five experiments that were conducted to determine if the use of a mnemonic system influences recall. In the first experiment an attempt was made to determine what elements of the mnemonic system, if any, were responsible for improving recall. In each individual experiment the following areas were controlled and assessed: presentation, “transfer paradigm”, list type, and “list abstractness”. These variables were manipulated to assess whether these variables affected, relative to a control, to see which part played the biggest role in actually helping people to memorize thins in regards to mnemonics. The two most significant findings that affect recall the most was the use of lists and ‘peg-words’ that were used to associate the terms to be memorized, greatly increased the chances for those to be able to memorize the material. Also, when using mnemonics the rate of presentation is most effective in done more slowly to make sure the students understand how the information is structured and built in the brain by using mnemonics.


Overview: In this article the approach was taken to see how mnemonics worked to help people who had been seriously injured in various types of accidents that led to memory lost. The article reported findings that were found in a study of many different mnemonic strategies and gave suggestions of which mnemonics would be most effective at first and then gradually increase the rate and amount of retention mental power that is required. Their finding show that past ideas of what where possible for people that had suffered memory loss in accidents can be greatly increased in there is simple application of mnemonics in the relearning process. Because like in childhood we learn a way to remember and with sever accidents were even loose the way to encode that information and it is necessary that the therapists that work with the patient teach them the most effective way for them relearn things, and this article claims that it is by mnemonics.

This article seemed to be the most helpful, because in its review I learned many sides of the debate of whether or not that music and singing aids in learning information for a long term basis. In this experiment, they wanted to find out two things, 1st: Did singing or having a melody to unfamiliar information help them learn it faster initially? 2nd: In regards to long-term memory, was it more likely those that people would remember things faster if they had leaned them by music? The first hypothesis was not supported, the second, however was. It was significant in how many times it took to relearn the information when initially learned by song. They also tried to see how visually seeing the information was helping them learn. Three main question arise from this review:

1st: Does music help recall be more effective for text and not just lists.
2nd: Is there more benefit to making the student sing, rather than listen?
3rd: Does familiar or unfamiliar melodies help you memorize more.

It was interesting to note that using music to learn initially made no difference, and that some found it cumbersome and difficult compared to learning just the prose.

*In addition to the ways that the students were presented the material, they were given a third way to learn the names of the people they were given visual cues and helps as they listened to the melodies, so the question that I got from it, was it the music or was it the visual images that they were able to link the information that they needed to memorize.

Part 3:

Brainstorming:
What types of studies could be used to gather the information I want?

1. I need to find a way to best gauge long-term recall, either by giving the main phrase and having them fill in the reference.
2. I could do actual book finding recall tests with given a phrase they can locate the exact, book, chapter, and verse.
3. I could use surveys after learning by a certain method and their attitude about it.
4. I could give a similar survey after they have tried both methods out and use their responses to see which method best fit their learning style.
5. I could try by focus groups to gauge overall feeling of scripture mastery learning.
6. I could interview students who did well in both methods, students who did well just in one of the method and also students who didn’t do well in either method to understand why..

Constraints:

Time:
- Classroom time, we have other directives that are of a higher priority to teach. We are asked to cover a certain amount of the curriculum, and if too much time is spent on scripture mastery other directives of more importance would be given less class time.
- Analysis and creation of both means of instruction would take time away from lesson preparation.

Validity:
• I need to find a way to present the scripture mastery references to be memorized in two ways both, visual and with the rhymes.
• I need to find a way to present the information with as similarity as possible as to repetition and presentation, to keep controls constant.

Effects of Methods:
• Would using two different methods in class cause trouble for my between the people whose learning style fit one way better than the other. (They say they can’t learn one way and don’t try when I present it in another way.)

Worth it?
• Is my time, the information gathered, face-to-face time worth the findings?

Methods:
Participants:
I would randomly select two of my six classes to serve as my two groups. The classes would vary in size between 22 students to 31. They would range in ages 15-18 approximately equal across gender. Each class would have equal chance of being selected. Once the two classes have been selected, they would be informed that I was going to try two different ways to learn the references for scripture mastery. I would not initially disclose the two ways, and I also would not inform the two groups I was trying it another way with another group. They would be given extra credit for participating and completing the tests involved in the experiment.

Materials:
For the illustration group; I will randomly select five from the twenty-five scripture masteries from the Old Testament curriculum. Once the five are selected I will print out the 5 individual pictures on a sheet of paper with accompanying explanations of what the pictures mean and how they show the main phrase and the reference.

For the rhyme group; I will randomly select five from the twenty-five scripture masteries from the New Testament curriculum. Once the five are selected I will print out a list of the five references with the accompanying rhyme and main phrase.

For testing the test will remain constant it will require the students to answer the same type of questions independent of the method. The test will give the main phrase from the scripture mastery bookmarks and the students will be asked to write in the book and chapter of from the main phrase. Example:

Fill in the reference (book and chapter) of the scripture mastery:
1. “Many will say Eat, drink, and be merry; for tomorrow we die’”
**Design and Procedure:**

**Visual Mnemonic Method:** One of the classes would be the first to learn the main phrase and reference by use of illustrated mnemonic devices. Total instruction time would be 35 minutes (the reason more time is given to visual mnemonic method is based on research list above in (Wood, 1967)) minutes to introduce the 5 pictures, show how the pictures teach the main phase and reference. The first 25 minutes the students would be shown each picture one at a time, and asked to sketch out the drawing to the best of their ability. They would be told what specifically should be in their drawing. After drawing the picture they would then write the reference and main phrase below their picture. Then the students would draw arrows from the reference and main phrase to the parts of the drawings that are to help them remember the scripture mastery. Physically they are drawing links from reference and main phrase to the picture, mimicking the link that the picture will hopefully happen using the mnemonic pictures. The same process will happen for each of the five scripture masteries.

The remaining ten minutes of instruction would be used to answer any questions of the links between the pictures and the reference and main phrase. Then using an overhead projector the students will be show the picture, then asked to state what the reference or main phrase was. This would be used as means of review of the pictures, reference, and main phrase.

Upon completion of the 35 instruction, a test would be given. The five main phrases would be given and then the student would be asked to fill in the reference. At the end of the test there would be five questions asked to gauge their experience learning in that particular method (they would not know the score to their test). The questions would be:

1. On a scale of 1 to 5, 5 being very effective and 1 being very ineffective, how would you say that learning the scripture mastery information in this manner was for you?
2. Why or why wouldn’t you want to learn further scripture mastery in this manner?
3. On a scale of 1 to 5, 5 being very confident and 1 being not confident at all, how did you feel you did on this test?
4. What about this way to learn the scripture mastery was helpful or not helpful?
5. If you were to memorize the reference and main phrase for all 25 scripture masteries in one year, how would you best learn them?

**Rhyming Mnemonic Method:** The other class would learn the main phrase and reference by use of rhymes, for example: Matthew Chapter 5, My light in Alive is Matthew 5 is the reference, and ‘Ye are the light of the World’ is the main phrase. Total instruction time would be 25 minutes (Wood, 1967). The first twenty minutes would be teaching the main phrase and references of the 5 scripture masteries along with the rhymes to remember both of them. To do this the students would write down the main phrase and the reference, and then below that write the rhyme. One all is written down the students would then draw arrows that liked either the main phrase and reference to the rhyme, again, mimicking the link that hopefully happens in the mind so that the rhyme becomes the trigger for recall. For the remaining five minutes flash cards of the rhymes and main phrase and reference the class would review.

Upon completion of the 25 instruction, a test would be given. The five main phrases would be given and then the student would be asked to fill in the reference. At
the end of the test there would be five questions asked to gauge their experience learning in that particular method (they would not know the score to their test). The questions would be:

1. On a scale of 1 to 5, 5 being very effective and 1 being very ineffective, how would you say that learning the scripture mastery information in this manner was for you?
2. Why or why wouldn’t you want to learn further scripture mastery in this manner?
3. On a scale of 1 to 5, 5 being very confident and 1 being not confident at all, how did you feel you did on this test?
4. What about this way to learn the scripture mastery was helpful or not helpful?
5. If you were to memorize the reference and main phrase for all 25 scripture masteries in one year, how would you best learn them?

Initial Method Analysis: Upon completion of both groups they would be scored and analyzed to see which of the two groups scored higher on initial recall test. The answers to the survey questions would be collected and recorded for analysis.

One Week Recall: After a week has passed from original instruction, a similar test to the first would be given, without the additional questions at the end of the test, to gauge long-term recall of the reference and main phrase.

Swap Methods: One week after the second recall test, the two classes will be given the other method of instruction, as outlined above. Again the students would be asked to answer the qualitative questions that are on the initial recall test.

Secondary Method Analysis: Upon completion of both groups they would be scored and analyzed to see which of the two groups scored higher on initial recall test. The answers to the survey questions would be collected and recorded for analysis. These results then would be analyzed on a person to person basis and see how well they scored on the first or second method and their reactions.

One Week Recall: After a week has passed from original instruction of the second method, a similar test to the first would be given, with additional questions at the end of the test, to gauge long-term recall, and ask them to compare their overall opinions as to which method was most productive, those questions being:

1. Which of the two methods either rhymes or visuals would you choose to use in your seminary class?
2. Why did you choose the method you did in the above question?
3. Is there any additional input you would like the teacher to consider in choosing one method or the other in teaching scripture mastery?

Flow of Method:
Class #1: Visual Method ➔ One Week ➔ Retest w/o qualitative ➔ Rhyme Method ➔ One Week ➔ Retest with additional qualitative questions.
Class #2: Rhyme Method → One Week → Retest w/o qualitative → Visual Method → One Week → Retest with additional qualitative questions.

Data Analysis, Synthesis, Decisions:

By analyzing and having both classes go through both of the methods, I believe that I can find valid data for both their scores and attitudes that will best help me know at least for the next year which method will be most effective as to their attitude and also so their long-term recall.

I would analyze the initial recall test, with the long-term recall test scores and see which ones the groups scored higher on. I would cross analyze the initial treatment for both groups as to attitude and test score as to see which initially worked the best and then do the same for the second treatment. Hopefully, using these measures of analysis, as I go throughout this research I can find out if there is evidence that would support my hypothesis.

Reflections of Research Design:
My brain hurts! I have learned so much from the readings and trying to apply them to my individual situation and research problem. I am worried that in both assignments I was not as thorough in regards to the analysis of the data, partly because I have tried to get good problems to research and then mostly focusing on how I would collect the data. Also, because I am least experienced in the area of analyzing and interpreting data, I haven’t covered the entire basis that I might have needed to. But with that said, I believe in regards to mandate about scripture mastery I now have the framework of what could be a good start to know what more I could do in the classroom to help them learn the main phrase and references and also memorize them word-for-word.

In additions it seems that as I have looked deeper into my questions, I am only finding more questions that deserved to be studies and researched.