

ABSTRACT OF CAPSTONE

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May 2, 2022

DEEP LEARNING:  
A TEACHER'S PLAYBOOK TO FACILITATE MULTIPLE APPROACHES OF  
STUDENT LEARNING THAT UTILIZE DEEP LEARNING PRINCIPLES

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Abstract of Capstone

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A capstone submitted in partial fulfillment of the  
Requirements for the degree of Doctor of Education in the  
Ernst and Sara Lane Volgenau College of Education  
At Morehead State University

By

Darin D. Griffith

Stamping Ground, Kentucky

Committee Chair: Dr. Jeannie Justice, Assistant Professor

Morehead, Kentucky

May 2, 2022

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DEEP LEARNING:  
A TEACHER'S PLAYBOOK TO FACILITATE MULTIPLE APPROACHES OF  
STUDENT LEARNING THAT UTILIZE DEEP LEARNING PRINCIPLES

This capstone project is a teacher's playbook for seminary and institute teachers of the Church of Jesus Christ of Latter-day Saints. Most of these teachers are volunteers, so this playbook offers them a variety of student learning activities. The playbook is organized into eight categories of different types of learning activities. Rather than teachers lecturing entire classes, students can participate in a variety of learning activities that promote deep learning. Howard Gardner's Theory of Multiple Intelligences was used as the foundation for the organization of the learning groupings. The variety of learning activities will incite students to use different parts of their brain which will foster a deep learning experience.

The following link is a video recording of the Abstract of Capstone:

<https://youtu.be/LykcecTv5Js>

KEYWORDS: (Deep Learning, Religious Education, Seminaries and Institutes of Religion, Multiple Intelligences Theory, Student-Centered Learning)

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Candidate Signature

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Date

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## DEDICATION

To the loving memory of my father, Larry Newton Griffith. His love and guidance are still felt today. To President Gordon B. Hinckley who encouraged everyone to “receive as much education as possible.” And to my loving Father in Heaven who sends comfort and peace, even when I don’t deserve it.



## ACKNOWLEDGEMENTS

Thank you to all who have assisted, supported, and guided me through all the endeavors of my education and life. A sincere appreciation to Dr. J. Jonathan Austin, Dr. Jonathan Nelson, and my chair, Dr. Jeannie Justice, for their support and assistance while serving on my committee. Thanks to Dr. John Curry and Dr. Cameron Stephenson who encouraged me to begin this journey.

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## Executive Summary

### Terminology

#### *Church Education*

**Church Educational System (CES).** An educational system run and operated by The Church of Jesus Christ of Latter-day Saints for the purpose of educating youth and young adults. This system runs and operates four universities, including the flagship Brigham Young University, as well as various elementary and secondary schools globally and Seminaries and Institutes of Religion (S&I) (Church Educational System, 2022).

**Seminaries and Institutes of Religion (S&I).** As a part of CES, this department operates religious education classes for all willing youth and young adults. S&I employs over 3,000 administrators, teachers, and support staff and has over 40,000 volunteer teachers to teach nearly three quarters of a million youth and young adults worldwide. The world is divided up into areas, each administered by an Area Director. Area Directors lead dozens of Coordinators who support local volunteer teachers. The North American Southeast Area currently includes 25 coordinators covering states from North Carolina to Florida, Louisiana to Southern Missouri. Each coordinator typically assists 60-80 volunteer seminary and institute teachers as well as teaches institute classes adjacent to a local university (Seminaries and Institutes of Religion, 2021).

**Seminary.** An educational program for high school age young men and young women, typically ages 14-18. Most students are members of the Church of Jesus Christ of Latter-day Saints, and their teachers are volunteers from their local ward (congregation). Each teacher is supported by a full-time employee, a coordinator, who trains, motivates, and offers supplies and other assistance. Classes normally last 50 minutes and are typically taught early in the morning before school begins at the church or at the home of the teacher. Online classes are available for students where distance prohibits gathering before school. In areas where there are large numbers of students, full-time teachers are hired. They teach throughout the day as students are released from school for a released-time program, often in buildings built next door to the high school. Class subjects include Old Testament, New Testament, Book of Mormon, and Church History (Seminaries and Institutes of Religion, 2021).

**Institutes of Religion.** Similar to seminary classes, Institute of Religion classes are taught for interested college students and other young adults ages 18-30. Where large numbers of interested students gather, buildings near university campuses are built to house these classes and activities for the young adults. In areas where there are fewer institute students, they may meet at a church, on campus, or in a home. These smaller programs have volunteer teachers, and they are supported by the S&I Coordinator. Subjects include the same as seminary plus a variety of additional subjects such as missionary preparation, eternal marriage, and more specific topics such as the Parables of Jesus, Teachings of John, and the Atonement of Jesus Christ (Seminaries and Institutes of Religion, 2021).

### *The Human Brain*

**Cerebrum.** The large part of the human brain responsible for thinking and learning (Cambridge Dictionary, n.d.).

**Cortex.** The layer of tissue that coats the cerebrum most strongly associated with cognition (Zull, 2006).

**Cerebral cortex.** (The combination of the cerebrum and cortex). The outer layer of the brain where sensing, integrating, and motor skills takes place. These three things work together to generate appropriate actions or movements (Roberts, 2011).

**Sensory (sensory cortex).** The sensory area of the brain is located in the back of the cerebral cortex and is where signals from the outside world are picked up by the brain. This includes what we hear, see, taste, feel, and smell. Teachers most often have students use this area of their brains to gather data as they read texts and listen to lectures (The Human Memory, 2020).

**Rear Integrative (post sensory integrative cortex).** Once data is sensed and gathered into the brain, it then must be processed to make meaning. This is done in the rear integrative area of the brain. This area of the brain stores memories and helps us comprehend past and current events. This is the reflecting part of the brain where we reflect upon what we have learned or sensed. Students can take tests and write papers sharing information they have learned (Zull, 2006).

**Front Integrative (frontal integrative cortex).** The creative part of the brain is located in the front, appropriately named the front integrative part of the brain. Data that has been processed in the rear integrative section can be integrated into conscious

thought and planning. New ideas and theories are created here. This area makes relevance out of the data gathered and processes it into areas to make it useful (Zull, 2006).

**Motor (motor cortex).** The top portion of the cerebral cortex is the motor section. This is where the testing of the theories that the front integrative area created takes place. This is the action part of the brain. Mental ideas become physical events as we test our ideas and theories (The Human Memory, 2020).

### **What is the core of the capstone?**

The core of this capstone is to create a learning tool for Seminary and Institute of Religion (S&I) teachers, similar to a coach's playbook. The purpose of the playbook is to help teachers assist students to engage in deep learning. It contains a list of learning strategies that teachers may choose from when preparing their lessons. Gardner's Multiple Intelligence Theory is used to organize these learning strategies into eight groupings. The core of the capstone is to assist teachers in using a variety of learning activities to stimulate different areas of the brain to encourage a deep learning experience (Roberts, 2011).

Gardner's Multiple Intelligence Theory is based on the belief that people learn in a variety of ways. He argues that "conveying information in multiple ways not only helps students learn the material, it also helps educators increase and reinforce our mastery of the content" (Northern Illinois University Center for Innovative Teaching and Learning, 2020). When students learn from a variety of methods, different parts

of their brain become active. When multiple parts of the brain are used in the learning process, deep learning can be achieved (Zull, 2002). Teachers need to use a variety of learning activities to stimulate all areas of the brain. Many teachers teach with the same method for each lesson. With the help of the playbook, teachers can identify a variety of learning activities that can incite new learning methods and, in turn, stimulate multiple parts of the brain, which can assist in students learning deeply.

### **Who is the capstone meant to impact?**

The initial impact of this capstone is the students in S&I classes in Kentucky. After volunteer teachers are instructed on the principles found in this capstone, the playbook can be given to them to help them prepare their lessons. It may also be shared with other coordinators. The setting for this capstone is seminary and institute of religion classes. The author currently teaches about 50 young adults in an institute of religion class in Lexington, Kentucky and supervises 70 volunteer teachers who teach over 400 seminary and institute of religion students in Kentucky, Southern Illinois, and Northwestern Tennessee. There are 24 other full-time coordinators in the North America Southeast Area. This capstone is designed to directly impact these teachers, the volunteer teachers they supervise, and all of the students they work with. This includes about 10,000 seminary students and 2,500 Institute students. This capstone could also be shared with other S&I teachers worldwide, as well as Sunday School and other teachers; This means thousands of youth and young adults may be



positively impacted by the research and learner activities found in this capstone project by having deeper learning experiences.

**How to implement this project.**

Although implementation is beyond the scope of this project, here are a few recommendations that would assist administrators and users of the playbook. The first recommendation is for S&I Coordinators to be introduced to the playbook in an area in-service training. Then each coordinator can introduce the playbook at a teacher in-service training. A brief review of the scholarly background should be given. This would help teachers with the understanding of why and how this playbook will help them in their lesson preparation and teaching. Coordinators should then show teachers the eight student learning groupings or categories. Teachers will see how quickly and easily it is to navigate between the eight groupings and see a list of learning activities for each grouping. Seeing how easy the playbook is to use should motivate teachers to want to use the playbook. Following this brief training, teachers should be invited to open the playbook for themselves and click on the eight categories and navigate through the learning activities to become familiar with the structure of the playbook. An invitation to use the playbook for an upcoming lesson should be made. S&I Coordinators can follow up to see if teachers have any questions or need any assistance. The playbook is set up so additional learning activities can be added. Teachers and coordinators can add and share these new activities with each other.

**Why were this capstone and related strategies selected?**

As a professional teacher for over 25 years, helping students learn has been the most important part of my career. Understanding how students learn is vital in the preparation and implementation of lessons and classes. Teachers often ask, “How can I teach this material so my students will learn and understand it?” Helping teachers with this question is a motivating factor for this capstone project. All strategies and practices in this capstone help teachers answer that question.

There are several theories and viewpoints about how students learn. One viewpoint is the information acquisition view, which is sometimes called the empty vessel view because a student’s mind is viewed as an empty vessel that needs to be filled by the teacher as they pour in information (Mayer, 2021). This viewpoint is limited when trying to understand complex material and incorporating it with students’ prior knowledge. There are many elements that are involved with learning, not just disseminating information (Ambrose et al., 2010). Religious education is complex. Most S&I students have previous Gospel knowledge and life experiences that must be incorporated into their learning. Elder Jeffery R. Holland reinforced this when he addressed S&I teachers. He said, “A student is not a container to be filled; A student is a fire to be ignited” (Holland, 2019, para. 24). This capstone project provides teaching ideas that do not just dump information into the students but provides learning activities to help them understand the material and help it make sense as they add it to their prior knowledge. This is a Constructivist learning viewpoint, and it is used with the creation and implementation of this project.

Although the implementation of the playbook is beyond the scope of this capstone, the creation of the playbook incorporates principles from Rogers' (2003) Diffusion of Innovation Theory to help the playbook be adopted by S&I teachers. This theory includes five main factors (LaMorte, 2019).

1. Relative Advantage – The degree to which the playbook is seen as a better product than the one it replaces. The playbook was created to be a better tool for teachers. Most teachers look at old lesson manuals or lesson ideas on Facebook, which takes time and energy to find, and they usually do not include deep learning student activities. The playbook puts evidence-based learning strategies in one location. There is no cost to S&I nor to the teachers. Lesson preparation time can be shortened. Teachers may feel less stress, worry, or anxiety about how they are going to teach their next lesson. The use and implementation of the playbook can be done immediately.

2. Compatibility – How consistent the playbook fits with the needs of the adopters. The playbook was created to be compatible with the S&I students, teachers, and classroom in mind. All learning activities are relevant and usable in an S&I classroom. The ideas of the learning activities were collected from the S&I Handbook and S&I professional teachers.

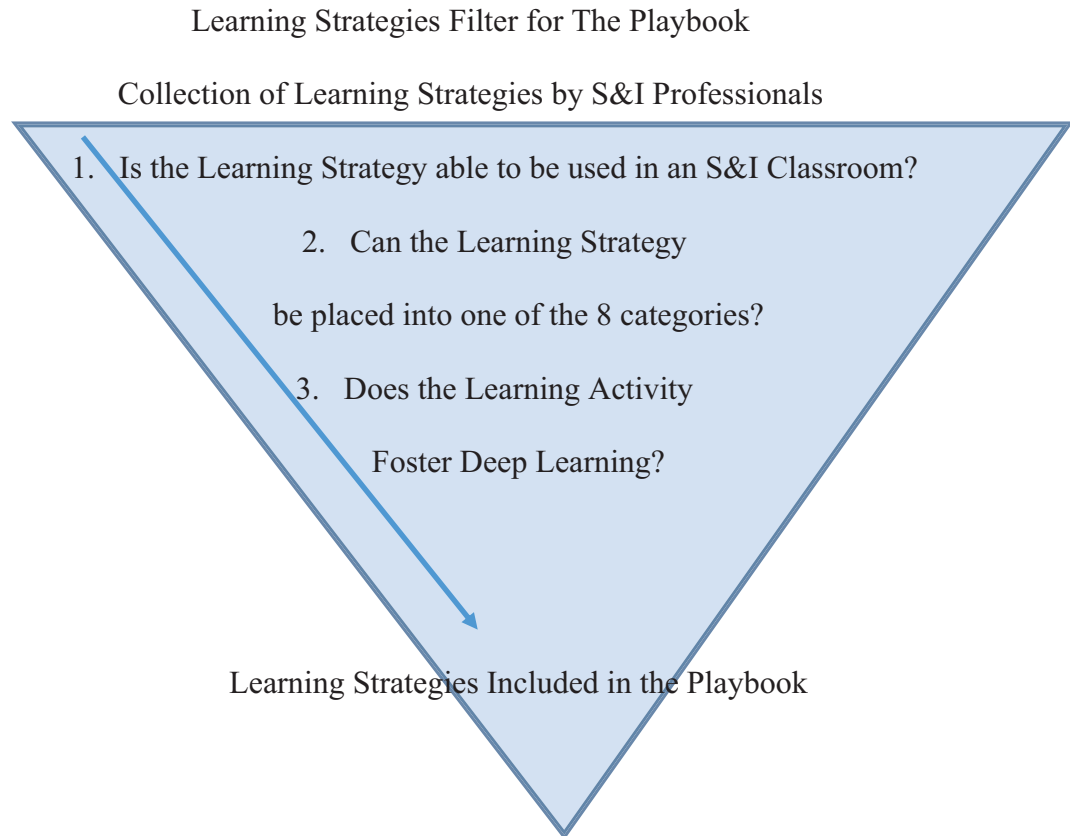
3. Complexity – How difficult the playbook is to use. The playbook was created to be simple to use. It was created in a Canvas module because the S&I teachers have access to, are familiar with, and use Canvas often. A simple

introduction was given on the first page of Canvas and easy links are available for teachers to click on the categories of learning activities.

4. Triability – The extent to which the playbook can be used before a commitment to adopt is made. S&I teachers can use the playbook as much or as little as meets their needs. There is no commitment for them to use it, thus they can determine the full level of its advantage prior to and commitment to use it.

5. Observability – The extent to which the playbook provides tangible results. The S&I teachers are able to see how the playbook will help them prepare lessons. When S&I teachers see the results of using the playbook, and the results of the students having a deep learning experience, then the goal is that the adoption of the playbook will take place quickly.

When creating the handbook, a list of learning strategies and learning activities was gathered. How to gather them and which ones would be included into the handbook was an important focus of the project. Evidence-based principles were used to determine which learning activities would be included. Some classroom activities are just for fun or to fill time, but they really don't create deep learning or a significant learning experience. The collection of learning activities had to be filtered to remove surface-level learning activities and include deep learning activities. To do this, a series of three filters were used. All learning activities must be able to be used in an S&I context, must be able to be organized into one of Howard Gardner's Multiple Intelligences, and lastly, must create a significant learning experience by using multiple parts of the brain through a variety of activities to invite deep learning.

**Figure 1***Learning Strategies Filter****Filter One: S&I Context***

S&I has an administration handbook for teachers, student manuals, and teacher manuals for both professionals and volunteer teachers to utilize. Most of these books are older and do not incorporate current significant or deep learning strategies. The playbook is not meant to replace these, per se, but is meant to help teachers have a source for teaching ideas that the current books do not provide, which includes deep learning strategies. All learning activities included in the playbook have been taken

from the handbook, manuals, or have been gathered by professional S&I teachers and have been adapted to include deep learning strategies. All learning activities added to the playbook are in an S&I context for S&I classroom usage.

***Filter Two: Multiple Intelligence Theory***

When choosing which specific learning strategies were included in the capstone, Howard Gardner's (1983) Theory of Multiple Intelligences was used as a guide. In this theory, Gardner explains that each individual possesses the ability to analyze information in several different ways. However, each of us have different strengths and weaknesses within those abilities (Gardner, 1995). Offering students a variety of learning activities gives more opportunities for students to use their strengths to understand what is being taught. Teachers should choose learning activities that focus on the needs of the students rather than teaching using the teacher's preferred methodology. With this Multiple Intelligences approach, the focus is on the students' learning rather than the teachers' teaching. This theory emphasizes that different individuals learn best in a variety of ways and so as much as possible, teachers should teach individuals in ways that they can learn and present information in multiple ways (Gardner, 2004; Northern Illinois University Center for Innovative Teaching and Learning, 2020). Eight of Gardner's multiple intelligences, that are relevant to S&I teaching, were chosen to be included in the playbook. They include verbal-linguistic, logical-mathematical, spatial-visual, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalist. The learning activities collected from S&I

professionals and handbooks were organized into these eight intelligences. Some of the names of these categories were changed to be more teacher-friendly in an S&I context. If the learning activity could not naturally fit into one of these eight intelligences, it was removed from the list.

When discussing Howard Gardner's Theory of Multiple Intelligences, it is important to understand we are not talking about learning styles and its associated theories (Franklin, 2006). It is important to stress that we are talking about a variety of methods of teaching. When students engage in a variety of learning activities, this variety engages the students in their learning and stimulates all parts of their brain. Humans learn best when they are taught by a variety of methods. This variety of learning strategies should not be confused with learning styles (Gardner, 1995; Kirschner, 2017; Nolen, 2003).

### ***Filter Three: Deep Learning***

Another factor that determines students' learning is the approach the students take towards their learning (Gardner, 1995). Teachers play an important role in helping students adopt a deep approach to learning (Baeten et al., 2010). How a teacher teaches does matter and if they utilize deep learning principles, students benefit (Baeten et al., 2010; Nelson Laird et al., 2008; Roberts & Roberts, 2008; Tagg, 2003; Trigwell et al., 1999). In other words, as teachers focus on student learning rather than on teacher presentation, students are more likely to take a deeper approach to their learning. There has been a shift in education over the past several

decades from a more traditional lecture-based classroom to one that is focused on learning from the students' perspective (Barr & Tagg, 1995). S&I is making this transition as well. Teachers can use activities that inspire deep approaches to learning (Boyle & Ravenscroft, 2012). Teachers are attempting to align their teaching objectives with student learning activities in the hope that students will engage in deep learning and have a more powerful learning experience (Biggs, 1999).

In addition to a student's approach to learning, their critical thinking skills and self-efficacy beliefs have been shown to be essential factors in their progress in their studies, although students' ability to think critically varies and may need assistance developing this skill (Hyytinen et al., 2018). Teachers can assist students with their learning and help them make sense of any new material by helping them make connections with their personal lives and experiences. Teachers can apply deep learning principles to their teaching and their assessments which, in turn, can promote and encourage students to take a deep approach to their learning (Asikainen et al., 2013; Boyle & Ravenscroft, 2012; Torshizi & Bahraman, 2019).

Kim B. Clark (2017) former Dean of the Harvard Business School and Commissioner of the Church Educational System, encouraged S&I teachers to help students engage in deep learning, which he explained as learning of the whole soul. Tagg (2003) defines deep learning as "learning that takes root in our apparatus of understanding, in the embedded meaning that defines us and that we use to define the world" (p. 70). Insights into the brain can enhance the understanding of deep learning (Zull, 2004). Understanding how the brain learns can lead to choosing which learning



activities are most helpful. Neuroscience has revealed great insights into how people learn. Psychologists theorize that deep learning comes through a cycle “of experience, reflection, abstraction, and testing—which then creates a new experience to continue the cycle of learning” (Roberts, 2011, p. 2). Those four cycles use different parts of the brain. Thus deep learning does not take place unless all four parts of the brain are used (Zull, 2002). The human brain first processes new information in the sensory area called the cerebral cortex in the back of the brain. Stories, images, actions, and lectures are first processed in this part of the brain. Information is processed with existing knowledge in the temporal cortex, which is the back integrative or bottom of the brain. If students hear a lecture, take notes, and take a test, they are using only half their brain, the back and the bottom portion. Unfortunately, this has been the pattern of most educational programs for over the past century. Teaching needs to include a variety of learning strategies that incorporate the other two areas of the brain.

The third area is the frontal integrative cortex which, as it sounds, is in the front of the brain. This part of the brain is where formal operational thinking takes place. Judgement and ownership of ideas take place here, and the production of new ideas are formed. The final area in this cycle is located in the motor section, near the top of the brain. This area is where learners test ideas for accuracy and relevance. The process results in new experiences and the cycle begins again (Roberts, 2011; Zull, 2002). “Deep approaches to learning require students to use a diverse array of cognitive complexity in their learning process” (Campbell & Cabrera, 2014, p. 497).

Thus, effective teaching and deep learning would use all four parts of the brain. If we know how the brain functions in the learning process, teachers can use that knowledge to structure teaching activities to enhance learning. The more we engage the brain during the learning process, the higher the level of learning in Bloom's Taxonomy students can reach (Bloom, 1956; Razzouk & Razzouk, 2008). Zull (2002) argues that if the entire brain is not engaged, then long term learning will not take place. This happens often in school if students memorize facts for a test, then soon thereafter forget the subject matter.

If no two people are alike, then similarly, no two brains would be alike. Different methods and strategies would be needed for different brains to comprehend the learning. Neuroscientific evidence is supporting the validity of the Theory of Multiple Intelligences (Shearer, 2018). Different teaching strategies and a variety of learning activities helps more students learn and understand and the material being taught (Gardner, 1995).

The brain is key to memory, and memory plays an important role in learning. There are different types of memory. Episodic memory is the type of memory that helps us remember facts as they are linked to episodes of our lives. Semantic memory is engaging and transforming memory that is long lasting. Episodic memory is linked to surface learning while semantic memory is linked to deep learning (Roberts & Roberts, 2008). Students who use episodic memory are engaged in the lowest level of Bloom's Taxonomy while students who are using semantic memory are using higher levels of learning. When teachers help students to use all four major parts of their

brain in the learning process, students remember more and make sense out of what they have learned and are more likely to apply the learning. This is where deep learning adds power to the life of a student.

The variety of learning activities found in the playbook utilize different parts of the brain. This increases the potential for deep learning to take place. This is why this capstone project was selected. Coordinators and teachers constantly strive to teach more powerful and effective lessons. Teachers crave lesson preparation assistance and constantly look for new ideas. This capstone fills a void where teachers need effective learning activities and ideas that lead to directed outcomes.

The use of technology and other multimedia can enhance the effectiveness of teaching the principles behind this capstone (Mayer, 2021). Canvas was used as the medium for the capstone project because currently, each S&I teacher, including volunteer teachers in the North America Southeast Area has access to Canvas, as the rights have been purchased by S&I for teaching and training purposes. The playbook has been created in a module that can be easily updated and shared via the Internet to any S&I teacher interested in using it. A printed handout can be created as well for any teacher who is not able to access Canvas or the Internet.

### ***Applying Research Results to the Classroom***

The following video and figures explain how the research results have been applied to the playbook.

<https://youtu.be/knw3OHuRIB8>

*Results to Application*

**Figure 2**

Results From Scholarly Research



Application

*Deep Learning Results*

**Figure 3**

Research Results: Deep Learning is superior to Surface Learning.



Application: Apply Deep Learning Principles

Teachers who use a variety of learning activities increase Deep Learning in two ways:

1. Students involve multiple parts of their brains (neuroscience),
2. Students learn in a variety of ways (Gardner's Multiple Intelligences Theory).

**Timeline for capstone implementation**

The research and study behind this capstone have been ongoing for the past several years. Working with the professors at Morehead State University, the author has been continually adding current research and information into the capstone. In the Spring of 2021, the professional teachers in the North America Southeast Area created a list of teaching ideas that were used to create the playbook. S&I also has a

publication that shares several teaching activities which have been included in the playbook. One of the strengths of this capstone is the ability to continually add teaching ideas and learning activities to the digital version. Teachers can share additional teaching strategies at any time and the author can add them to the playbook. The playbook was formally created in the Autumn of 2021.

### **Intended impact of the capstone**

The Objective of S&I includes helping students *understand* doctrines and principles found in the scriptures. (Seminaries and Institutes of Religion, 2021). Students who know and can recite dates, names, places, and events, but don't really understand the teachings and the doctrines, tend not to live after the manner of the teachings and the doctrines. Students must be taught in a manner that takes the knowledge deep into their souls. Deep learning is where students intend to understand (Entwistle & McCune, 2004). Students need to be taught powerful lessons that they understand to the point that it changes them. The intended impact of this capstone is to help teachers prepare more powerful lessons. The measurement of the impact can be seen in two areas. First, teachers will know if the project is supporting them by helping them create meaningful learning activities for their students. Teachers can use the capstone project to prepare lessons to help students take a deep approach to their learning. As teachers review their teaching strategies and review the activities found in the handbook, teachers can see what learning activities they regularly use and which new activities they might incorporate deep learning in order to use more areas

of students' brains. This assessment can be simply done by asking teachers if they are using the project. If they are, then it is helping them. Teachers don't use tools that they don't perceive as helping them. Thus, the first intended impact is to help teachers.

A second intended impact of this capstone is to bless the lives of the students. Teachers need to assess their students' learning. Seminary teachers administer a formal assessment each semester. Teachers can also give other formal and informal assessments to see what students are actually learning. The impact of this capstone can be seen in the assessments of these students to identify if they have incorporated understanding and applied deep learning principles (Torshizi & Bahraman, 2019). In other words, when students take a deep approach to their learning, they score higher on assessments. In addition to recalling information, students can understand, apply, and analyze the information and use it in real life situations. Their learning moves up on the Bloom's Taxonomy pyramid (Anderson et al., 2001).

There is a possibility for all S&I teachers in the entire Southeastern United States to have access to the results of this project. There are more than 10,000 potential students in the Southeast that can be positively impacted by this capstone project. Students can be more engaged in the learning process and teachers and students can feel that learning is taking place at a higher and deeper level. The hope is that students will learn more deeply because the teachers are applying deep learning activities. The teachers are using these activities as a direct result from using the principles and activities from this capstone.

**Limitations of the capstone**

There are several limitations of this capstone. One of the major limitations is the use of volunteer teachers to implement its main function. Many of the volunteers work full time and have family obligations. They are members of their own community, with a large number of commitments and obligations they face on a daily basis. With different teachers, this experimenter effect may change how the playbook will be used. Each class takes an hour to teach, plus an hour or so of preparation time which is a sacrifice of their own time and their family time. Whether or not the playbook will be used is up to their own personal desire, understanding, and discretion.

Students' willingness to participate in class is a limitation to this project. Some students are less willing to participate in the learning process than others. While many students love to engage in activities and learning, there are always those who choose to be inactive and just sit in class rather than fully engage. Students vary from age, gender, desire to learn, and willingness to participate. With different students, this subject effect may change the results from using the playbook.

The ability for the author to convince the Area Director and Area Training Council that the capstone project will bless the teachers and students in the area is a limitation. If they do not see the need or the power of how the principles and the practical use of the playbook will bless the lives of the students, the capstone will be limited to the teachers and students in the author's area and those who are willing to use it. The author has spoken with the Area Director and is encouraged to proceed.

The expectation is high that the Area Training Council will see the benefit of this capstone, as the author currently serves on that council and the focus of recent training is on student learning and deep learning outcomes. Instrumentation and testing are limitations to this project. With such a large number of teachers, and how they choose to implement the project can alter the intended outcomes.

Another limitation is the use of physical resources. The use of Canvas is currently available and encouraged, but this resource could change at any time, even though it does not seem likely in the near future. Funds to produce the tool could be reduced or cut, but again, this seems unlikely.

The main limitation is the collection's ability to clearly state learning activities in a simple way, so teachers can understand what ideas are being expressed. For example, "Asking thought provoking questions" could be listed as a teaching activity. The understanding of what that means might be diverse when working with a vast number of volunteer teachers. Listing teaching activities that are simple to implement and easy to understand is a difficult task. Regardless of the final words on the playbook, teacher understanding and ability to implement will be a limitation of this capstone. To help overcome this limitation, the collaboration of S&I coordinators was used to gather and simplify a list of learning activities ideas that are practical and easy to use.



**Reflections**

Helping youth and young adults learn, understand that learning, and living what they have learned has been a focal point of my career. I truly love and care about these young people. Learning and understanding the principles of deep learning myself has helped me be a better teacher. This capstone project is something that I really pray will help teachers have better classes, so students have deep learning experiences.

I have learned a lot from creating the playbook and writing this capstone summary. Two important lessons that I have learned are that teaching is not easy and helping other teachers is even more difficult. I have learned that there is not one perfect way to teach a group of people. People learn in a variety of ways. This variety engages the whole soul in the learning process. If a teacher teaches the same way in each class, then there may be many students who do not learn as much than if that teacher would use a variety of learning activities. All the students would be blessed if their teachers would teach in a variety of ways. This capstone project empowers teachers with a variety of learning activities. If I could take this project to the next level, I would empower teachers with the understanding of how to create their own deep learning experiences with their students. In other words, rather than give teachers a list of learning activities, I would teach them how to create deep learning student activities. Working with volunteer teachers who have limited time makes this difficult. But this could be a future project to help teachers take the next step forward.

## Capstone Project

The following link contains a 30-minute video showing all aspects and details of the capstone project: The Playbook!

<https://youtu.be/Ldxccg39ox0>

The following pictures are screen shots of the capstone project including the introductory information and beginning of each page.

### Figure 4

#### *Module Home Page*

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Playbook for Deep Learning Student Activities

## Playbook

**A Handbook of Student Learning Activities that promote Deep Learning in the Classroom.**

CLICK ON ONE OF THE 8 ACTIVITY GROUPINGS TO READ FURTHER INFORMATION AND SEE A LIST OF STUDENT LEARNING ACTIVITIES.

<a href="#"><b>Reading and Writing Activities</b></a>	<a href="#"><b>Class Discussions</b> <small>(asking effective questions)</small></a>
<a href="#"><b>Art Activities</b></a>	<a href="#"><b>Move! Out of Seat Activities</b></a>
<a href="#"><b>Music</b></a>	<a href="#"><b>Group Activities</b> <small>(Social &amp; Belonging)</small></a>
<a href="#"><b>Self-Reflecting Activities</b></a>	<a href="#"><b>Outdoors</b></a>

For information on the academic research behind this work, including the how and why, [Click Here](#)

These student learning activities are suggestions from S&I Coordinators and the Gospel Teaching and Learning Handbook: A Handbook for Teachers and Leaders in Seminaries and Institutes of Religion (GT&L Handbook) Published by the Church of Jesus Christ of Latter-day Saints, 2012.

## Figure 5

### *Deep Learning Scholarly Background*

[View All Pages](#)

Deep Learning, Scholarly background: The Why & the How

#### Deep Learning

When Elder Kim B. Clark (2017a), Commissioner of Church Education, first introduced the concept of deep learning to S&I teachers, he said:



"Learning is deep when it increases our power to do three things:

(1) to know and to understand;

(2) to take effective, righteous action;

and (3) to become more like our Heavenly Father and His Son, Jesus Christ."

The concept of Deep Learning has been around a long time. Scholars introduced the terms "deep learning" and "surface learning" back in the 1970's (Marton & Säljö, 1976). Scholars define deep learning as "learning that takes root in our apparatus of understanding, in the embedded meaning that define us and that we use to define the world" (Tagg, 2003, p. 70). Elder Clark simply defines deep learning is learning of the whole shoul (Clark, 2017b). Surface learning is the opposite. Surface learning is when students extend minimal effort such as temporarily memorizing something to pass a test or minimal effort to pass a class. S&I teachers are often frustrated as students sit back and take a "surface learning" approach rather than a "deep learning" approach to their S&I classes. Teachers often wonder what they can do.

Teachers play an important role in helping students adopting a deep approach to learning (Baeten et al., 2010). What a teacher does in the classroom matters and if they utilize deep learning principles, students benefit (Baeten et al., 2010; Nelson Laird et al., 2008; Roberts & Roberts, 2008; Trigwell et al., 1999). As teachers focus on student learning rather than on teacher presentation, students are more likely to take a deeper approach to their learning. Doctrine and Covenants 50:13-24 makes it clear that both teachers and students have a shared responsibility for learning.

Psychologists theorize that deep learning comes through a cycle "of experience, reflection, abstraction, and testing—which then creates a new experience to continue the cycle of learning" (Roberts, 2011, p. 2). Those four cycles use different parts of the brain. Thus deep learning does not take place unless all four parts of the brain are used (Zull, 2002). What this means for teachers is they cannot just stand in front of the room and tell students about the scriptures and expect students to have a deep learning experience. Students need to have "significant learning experiences" in the classroom that utilize all four major parts of their brain (Fink, 2013; Zull, 2002).

Howard Gardner's (1995) Multiple Intelligence Theory explains that each of us can learn in a variety of ways but we learn best from our preferred way of learning. For example, some students learn well by reading while others learn better through music or physical movement. Neuroscientific evidence is supporting the validity of the Multiple Intelligence Theory (Shearer, 2018). Different teaching strategies and a variety of learning activities helps more students learn and understand and the material being taught (Gardner, 1995).

So what does all this mean for teachers? Teachers need to identify and create learning experiences for their students that will create deep learning or a "significant learning" experience (Fink (2013). This can be achieved by using a variety of learning activities to include different learning styles and to activate all four major parts of the brain. Now for a stake called teacher to plan a lesson with this in mind is overwhelming. It is overwhelming for a professional teacher! The creation of this Playbook for Deep Learning is to help teachers use a variety of student learning activities. They are organized in eight learning styles that are associated with Gardner's Multiple Intelligence Theory. Teachers must realize that "all learner-centered strategies must be adapted, shaped, and molded so that they fit the context in which they are being used." (Weimer, 2002). Thus teachers may review the list of learning activities and adapt them to meet the needs of their students.

As teachers review the list of learning activities and adapt them to their classes, and invite students to take a deep approach to their S&I classes, the deep learning outcomes that Elder Clark mention can take place and students can experience the joy of the Gospel (Clark, 2017b).

## Figure 6

### *Student Learning Activities Page*

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Reading & Writing Activities

#### Student Learning Activities: Reading & Writing Activities

Many people learn well by using the written and spoken language. Some students do well with reading and others are master writers. Here are a few ideas and thoughts about reading and writing.

**Every Student should FEAST upon the Words of Christ. This is where every teacher and student should begin their Deep Learning journey. Here is a page with the FEAST Program and bookmark attached: [FEAST upon the Words of Christ](#)**

The GT&L Handbook has some thoughts and ideas on [reading](#) the scriptures together in class: [Click Here for "Read the Scriptures Together in Class"](#)

The GT&L Handbook has some thoughts and ideas on [writing](#) in class: [Click Here for "Writing Exercises"](#)

**Other Reading & Writing Activities:**

**Doctrines on the Board:** Whenever a doctrine or principle has been identified, have a student write it on the board and have everyone record it in their journal. Then have everyone record a definition of that doctrine/principle. Conclude with having students write why that doctrine/principle is important and how they are going to or already are living that principle. Another option is to have a list of doctrines/principles on the board before class so students can look for them as they study that day. They can add additional doctrines/principles that they and the class identifies.

**Poetry:** Students can write a poem about a doctrine or principle. This is a great elevate learning project for institute students. Have them read and explain their poem and meaning behind it. Have students who are gifted readers read the scriptures like a poem (especially the poetry sections of OT and Psalm of Nephi).

**Letter Writing:** Writing a letter to someone is a great way for students to express thoughts and testimony. They can write a friend of another faith, a parent, sibling, local church leader, or even their future self. They can compose deep and personal thoughts. They can write a letter of appreciation to the Savior. Thank You cards are easy letters to write to nearly everyone in their lives.

**Social Media Writing:** Many students are great "Texters". Invite them to text, tweet, or use other social media to explain a doctrine or testify of some truth they know and understand that they learned in class.

## Figure 7

### *Student Learning Activities Page Continued*


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Class Discussions - Asking Effective Questions

#### Student Learning Activities: Class Discussions

**Asking effective questions** is **one of the most important skills** a teacher can develop. Questions can engage students in the process of understanding the scriptures and help them identify and understand important gospel truths.

Henry B. Eyring said "To ask and to answer questions is at the heart of all learning and all teaching."



While there is a wide variety of questions a teacher may ask, there are four general types of questions that are particularly important in gospel teaching and learning:

1. Questions that invite students to **search for information**
2. Questions that lead students **to analyze for understanding**
3. Questions that invite **feelings and testimony**
4. Questions that encourage **application**

*(GT&L Handbook, p. 58-59).*

**Figure 8**

*Student Learning Activities Page Continued*

Asking searching questions might be a great way to begin, then moving to analyzing, inviting, and applying questions helps students take a deep approach to learning.

Here is a chart to help you prepare Deep Learning questions: [Asking Inspired Questions.pdf](#) ↓

**Asking Inspired Questions**

			
<p><b>Search</b></p> <p>Look for Information:</p> <ul style="list-style-type: none"> <li>• Who?</li> <li>• What?</li> <li>• When?</li> <li>• How?</li> <li>• Where?</li> <li>• Why?</li> </ul>	<p><b>Analyze</b></p> <p>Think about the meaning:</p> <ul style="list-style-type: none"> <li>• Why do you think...?</li> <li>• What difference do you see?</li> <li>• How is it that...?</li> </ul>	<p><b>Invite</b></p> <p>Feelings and testimony:</p> <ul style="list-style-type: none"> <li>• When have you felt...?</li> <li>• When have you seen others...?</li> <li>• How is your life different...?</li> </ul>	<p><b>Apply</b></p> <p>How can I incorporate this:</p> <ul style="list-style-type: none"> <li>• What will I do because of this lesson?</li> <li>• What change will I make in my life?</li> <li>• How can I live this principle in my life?</li> </ul>

**Asking Questions to Bring the Savior Into the Center of the Class:**

- Where do you see the Savior and His Atonement in this verse (or scripture block)?
- Which Christlike Attribute would help you live this principle/doctrine?
- Which verse or doctrine do you feel the Savior would have us focus on in this scripture block?
- What did the Savior do to live this principle?
- How can you rely on the Savior to help you live this principle?

These are examples of questions that can be asked to help students think more deeply about the principles taught and to bring the Savior into the forefront of the lesson. There questions can be adapted and changed to meet the needs of your class and students.

## Figure 9

### *Art Activities Page*

Art Activities

#### Student Learning Activities: Art Activities

Many students learn best by creating. Here are a few ideas of what students can create in and sometimes out of class. Many of these can be Institute Elevate Learning activities or makeup assignments. Have the students explain why they created the art and what their motivation was. Ask how the art helped deepen their knowledge, understanding, testimony. Explaining their experience helps them have a deeper learning experience.

Here is some information and ideas from the GT&L Handbook: [Click Here for "Objects & Pictures"](#)

##### Creating Ideas:

- [Build](#) a Temple, boat/ark, or tower of Babel out of materials provided. Possible materials: colored paper, scissors, markers, tape, glue, etc.
- [Build with Legos](#) a Temple or other buildings or objects.
- [Draw](#) or [paint](#) a picture. Have one student describe a scripture story while others paint the scene. Or have students paint what they see in the scriptures. Students can paint or draw a scene depicting a Christlike attribute or a doctrine.
- [Paper Origami](#) for an object in the lesson. Dove, star, etc.
- [Playdough](#) for an object in the lesson. This can also be used when discussing things that should be moldable such as a willing heart.
- [Photography](#) Students can use their phone or other camera to capture a doctrine or principle. An example, take a picture of what you think "Love" looks like. (Kindness or other principles work well too).

## Figure 10

### *Art Activities Page Continued*

Move! Out of Seat Activities

#### Student Learning Activities: Move! Out of Seat Activities

Often, teachers talk too much and students do too little. The Savior has us do things to deepen our understanding and the meaning of covenants. For example, we physically get into the water to be baptized to deepen the understanding and meaning of our covenant. We physically take bread and water and eat and drink it to remember our covenant. Inviting students to get out of their seats and move helps deepen their understanding. Here are some moving activities that may help deepen students' understanding.

- [Baptism](#): Have a priest demonstrate how to baptize someone in the class. The physical movement is a great way to deepen the lesson.
- [Act Out A Scripture](#): Give a student or group of students a scripture block and have them act it out. Have them really study the verses to see if what they are acting out is actually in the scriptures or not. This process of reading and acting may help them to look deeper into the scriptures.
- [Pantomime](#): Have a student pantomime a principle (example: act out kindness or service).
- [Go and Do](#): Rather than sit and talk, have students get up and do something from the scripture block. If they read about service, have them go do a service project. If they read about tithing, have them go get a tithing envelope or open the online donation site and show how to pay tithing. Students often remember physical activities because the movement helps them take a deeper approach to their learning where they retain this memory.
- [Classroom Maze](#): Moving chairs, tables, or desks around to create a maze instantly sparks students' interests when they enter a room. Having a student guide another blindfolded student through the maze can have many applications such as following a prophet or the Holy Spirit. Students can explain how they felt and talk about their experience which can deepen the understanding of these principles. They can relate them to their own personal life and set goals to apply the principles deeper into their lives.
- [Hide N' Seek](#)

"Play hide and seek in your classroom. The only rule is you can't leave the class. The teacher is it. Go! (Count to ten with your eyes closed). When you open your eyes you will immediately see the majority of the class. Start calling out all their names. Some students will have tried, unsuccessfully, to hide under the desks, or the table, or even the piano (which is about the only semi-concealed place in the classroom). When all have been seen ask the class why you found them all so easy in this game of hide n' seek. They will all say it is because there was nowhere to hide. Exactly!

Application: We cannot hide our sins from God. He sees and knows all our actions, and thoughts and intents of our hearts. At the judgment day we will not be able to hide anything from him either, for we will have a perfect recollection of all our actions."

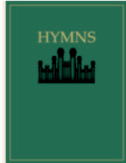
## Figure 11

### *Music Page*

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Music

**Student Learning Activities: Music**



"Some of the greatest sermons are preached by the singing of hymns. Hymns move us to repentance and good works, build testimony and faith, comfort the weary, console the mourning, and inspire us to endure to the end." (*Hymns*, p. ix). Music can move us into Deep Learning!

[Click Here to go to the Church Music Website](#)

- **Find a Hymn:** Invite students to find a Hymn (or other appropriate song) that teaches the doctrine that they are learning.
- **Compose a Song:** Invite students to compose a song about a subject or doctrine they are learning. (A great Elevate Learning project!). Have them explain their motivation and experience with composing the song. These thoughts will deepen their experience and help them remember the doctrine.
- **Musical Number:** Invite a student to play a special musical number about a doctrine or teaching they have learned.

## Figure 12

### *Group Activities Page*

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Group Activities (Social & Belonging)

**Student Learning Activities: Group Activities**

That create a social atmosphere and a sense of belonging

Deep Learning rarely takes place without the student feeling a sense of belonging. The Savior was a master at helping people feel they belong with Him. When students feel like they belong in the class, they are more likely to take a Deep Approach to their learning.

The GT&L Handbook gives some great principles and guidelines on small group discussions and assignments. [Click Here to read what the Handbook says.](#)

Here are a few group activities with possible applications:

- **Laser Pen**  
 "Each student in the class is given an 8 x 11 piece of paper with a hole in the middle of it about the size of a quarter. Depending on what principle you want to teach, you can vary the size of the holes, some smaller and some larger. Tape a laser pen on top of a desk shooting across the middle of the room (you will want to tape it down so the laser beam will stay steady and constant, if you try to hold it your will sway and move). The purpose of the activity is to have the students line up and hold their papers so the laser beam can pass through all their holes and hit the opposite end of the wall of the class. If a student moves or sways the beam will hit their paper and will not be able to pass through to the next person in line or those who follow after them.

Application: The laser could be likened to activity in the church. If we get off, what is likely to happen to those who follow after us (they will not have the light of the gospel). This activity also shows that there are consequences to our actions, that what we do today affects what will come to us tomorrow. This activity can also teach that there are certain things that allow the spirit to pass through our lives and certain things that cut it off. If you move or get 'out of line' the light does not pass through."

## Figure 13

### *Self-reflecting Page*

Self-Reflecting

#### **Student Learning Activities: Self-Reflecting**

Many students learn best through their intra-personal skills. They ponder about their feelings, and their wants and needs.

There are many activities that help these learners have a deep learning experience. A few include:

- [Writing Exercises](#): See what the GT&L Handbook says about Writing Exercises Here. [Click Here for "Writing Exercises"](#)
- [Journal Writing](#)
- [Break The Pattern](#): Here is an activity that can help students reflect on their scripture analysing skills.

"As the teacher, choose a random student in your mind. Tell the class that you are going to give them clues and they need to figure out who the person is in the class you have chosen. If the student you have chosen has brown hair, then randomly call out three students who have brown hair to stand up ("Steve, Sphen, and Helga, please stand up"). Tell those students to then sit down, and you don't say anything as a teacher. If your student you have chosen is a Junior, then have three random Junior stand up. Same thing. If the student you have chosen is shorter than 5'6", then have three students who are under that height stand up. Little by little the students will begin to break the code, see what you are doing, and put the clues together about who the individual is.

Application: Is this how we study our scriptures? Do we analyze things, try to figure out and see the deeper meanings behind things? When we study Isaiah, or the Book of Revelation, much of our study needs to be on this level of analysis to understand the author's meaning. This activity can also be used to teach about order, and how the Lord uses patterns and processes, such as dispensations, etc. This can also be used to teach about the second coming, and discerning the signs of the times."

## Figure 14

### *Outdoors Page*

Outdoors

#### **Student Learning Activities: Outdoors**

Many students learn best when connected with Nature. God's creations are powerful tools for learning. Here are a few ideas to help students learn by being outdoors.

- [Collect items From Nature](#): Any lesson about the Creation of Earth or All Things Testify of God (2 Nephi 11:4). Invite students to share items from nature that testify of God. Explain why they chose that item.
- [Plant a seed](#) and watch it grow over time. Liken this to faith or testimony. Have them water the seed/plant. They can water when they read or participate in scripture study or class. Have them notice the growth over time. This can be done indoors too. Some students thrive off of nature.
- [Prayer Rock](#): Have every student bring a rock from home or go outside and find a rock. Paint "Prayer" on it. Invite students to place it on their bed to remind them to pray every night before bed. They can place it on the floor each night to remember to kneel in prayer each morning.
- [Forgiveness Rock](#): Have students find a rock and carry it around for 24 hours including while they play sports, musical instruments, and sleep. Talk about forgiveness and being able to put down the burden of the rock.
- [More uses for Rocks](#): Christ is the Rock. Prayer is a Rock. Use rocks when talking about rocks. Have students find a variety of rocks and precious stones.

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