

Using Literacy Strategies to Support a Preservice Teacher Candidate in Becoming an Effective Teacher

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Tell me and I forget. Teach me and I remember. Involve me and I learn. -Benjamin Franklin

Abstract

This qualitative investigation used a case study approach to collect data to answer this question: Did a preservice teacher candidate enrolled in a content literacy course while seeking initial middle-level teacher certification find literacy strategies useful in the instruction of seventh-grade science students? This study reports findings collected from one preservice teacher candidate, along with course peers, seeking initial certification for middle-level instruction. Data collection included an interview, member checking, and observations. Over the fifteen-week period of instruction in an undergraduate content literacy course, data provided evidence that literacy strategies used by a preservice teacher candidate in the instruction of science for middle-level students provided effective acquisition of instructional content.

Keywords: preservice teacher candidate, content literacy course, literacy strategies

Seventh grade science preservice teacher candidate

I was asked by the classroom teacher to prepare my group of students for a virtual field trip to the Weather Center of the National Aeronautics and Space Administration (NASA) that will include a presentation on space weather offered by a NASA scientist. I aim for this experience to assist my students, who have learning needs that require differentiated instructional consideration, in learning about space weather by being engaged so that they will leave this experience with the knowledge to discuss their learning in both written and oral formats. Since I am preparing to teach middle-level science, can you provide me with several strategies I can use with my students?

Professor's response

My professional task as a teacher educator is to provide instructional ideas that support teacher candidates to effectively teach their students now and in the future. Yes, I will assist you and the students in this university class with the identification of ideas you and your peers can consider implementing with students.

The exchange above describes a preservice teacher candidate's desire to identify strategies to assist students in acquiring, practicing, and implementing the new learning that will be gained from a virtual NASA fieldtrip. As a professor preparing preservice teacher candidates enrolled in an undergraduate content literacy course, this is a frequent request received and a similar response provided for my students.

1. Introduction

Schools today are populated with diverse students who bring experiences acquired through their funds of knowledge (Folk, 2018). In 2021, the National Center for Education Statistics (NCES) reported that there are 49.5 million students enrolled in public schools in the United States in kindergarten through twelfth grades (22.4 million were White, 7.4 million were Black, 14.1 million were Hispanic, 2.7 million were Asian, 2.3 million were two or more races, 0.5 million were American Indian/Alaska native, and 0.2 were Pacific Islander). Considering the growth of diverse students in the United States, preservice teacher candidates need to be equipped in identifying pathways to value the backgrounds and experiences students bring into classroom settings while also assisting with the enhancement of their literacy proficiency (Rafa et al, 2020).

The students in school settings today will become our tomorrow's adult citizens. Therefore, kindergarten through twelfth grade students need to develop the skills that are necessary to be capable of becoming consumers and users of information presented in written and oral formats. Research indicates that literacy strategies demonstrated and used during the instruction of content area subjects in school settings scaffolds and improves academic achievement (Schleppegrell, 2004). This type of instruction requires the need to explore and demonstrate, with students, multiple strategies with repeated exposure of these strategies in written and oral contexts to assist with the retention and application of information. The use of literacy strategies with content instruction contributes to vocabulary development (Nagy et al, 1985), to the ability to respond to questions and statements from a critical lens (Eurydice Network, 2011; Ivey & Fisher, 2006), to an increase in positive assessment results (Anderson et al, 1988), and to an increase in content knowledge (Marzano, 2004). This information can be considered as a prompt for teacher educators to include literacy strategies in the preparation of preservice teacher candidates who should notice and document student achievement.

This article provides a narrative description of instructional information provided by the professor-researcher for a preservice teacher candidate seeking literacy strategies to incorporate into a seventh-grade science class. Although the article responds to a request made by the preservice teacher candidate, it is important to note that the instructional information discussed in this article was also provided for the other twenty-one preservice teacher candidates who were enrolled in the undergraduate content reading course.

2. Theoretical Frames

The framing of this article was informed by research theories providing a lens for the transfer and application of the literacy strategies presented and demonstrated in an undergraduate content reading course offered to students seeking initial certification to become a middle-level teacher. Theories for this article consider student engagement with social contextual interactions and meaningful discussions (Shulman, 1987; Zimmerman, 1990). Research on student learning has provided a lens into the benefit of directed and meaningful social interactions used to impact cognitive development. Bull et al, (2000) indicated that effective learning connects an individual with others in a dialogical exchange to acquire a deeper understanding of concepts acquired using speech, visual cues, and feedback from peers and linguistically responsive exchanges from the teacher. Vygotsky (1986) suggested that learning occurs in a sociocultural environment that allows various forms of language to provide understanding. Preservice teacher candidates collaborating with their professor in learning literacy strategies can result in academic gains among the students they teach (Sowa, 2009). Connecting learning to cooperative interactions among the professor and preservice teacher candidates transfers to enabling kindergarten through twelfth grade students to respond to prompts that require critical thinking (Echevarria et al, 2000). For example, consider this instructional scenario presented to students by a middle-level mathematics teacher (Moschkovich, 2013).

The teacher assigns different mathematics problems to five student groups to enhance collaboration in the form of oral and written responses.

- One student volunteers to read the problem to the group.
- Students discuss the information and steps needed to solve the problem.
- Students write the steps needed to solve the problem, draw the steps needed to solve the problem, write a description of the process used to solve the problem, and provide the answer to the problem.
- Each group presents to the teacher and peers the steps used to solve the problem and provides the answer to the mathematical problem.

The teacher provided the students with the time to work collaboratively in groups to discuss and plan the steps needed to solve mathematical problems. This type of collaboration encourages dialogical exchanges that promotes language acquisition and content skill development.

2.1 *Readying Preservice Teacher Candidates for Field Experiences*

To prepare the teacher candidates enrolled in a content reading course to provide group instruction in their assigned field-based classrooms, the professor-researcher provided weekly campus-based traditional instruction during the semester in a three-hour course that included the use of authentic classroom scenarios, a textbook, and program state and national standards. The professor-researcher stressed to the preservice teacher candidates the need to be considerate of the learning styles and needs of their students in classroom settings by intentionally

remembering to 1) reduce the rate of instruction to build background knowledge for learning new concepts; 2) introduce vocabulary by building in experiments, using embedded descriptions, and placing the new vocabulary on content walls with the definition and a visual description; 3) provide opportunities for students to rephrase, repeat, clarify, and discuss with peers responses to comprehension items presented by the teacher; and 4) design various forms of informal assessments to gauge students' understanding and retention of information.

Each preservice teacher candidate provided one-hour small group instruction in a middle school classroom one day per week for fifteen weeks. They used a variety of printed and media resources with the seventh-grade students to provide instruction and for demonstrating literacy strategies to use when interacting with text sources. The professor-researcher provided instruction during classes at the university that demonstrated twenty literacy strategies such as graphic organizers, think-alouds, and annotation-of-text. However, the teacher candidate highlighted in this study selected the following strategies to use with the assigned students: 1) the Cognitive Process Dimension/Bloom's Taxonomy (verbs) that benefits instruction by providing guidelines for constructing statements and questions for students to use as they provide oral and written responses (Walsh & Sattes, 2005); 2) the revoicing procedure that provides an opportunity for the teacher to engage students by focusing on reciprocal oral exchanges that promote deep understanding of contextual concept; and 3) note taking as a strategy that encourages students to collect and record information provided through text and oral formats. The following passage provides contextual information used by the professor-researcher to explain and demonstrate the three strategies the preservice teacher candidate selected to use with students in the assigned seventh grade science classroom.

What is Space Weather?

Activity on the Sun's surface creates a type of condition called space weather. The Sun is about 93 million miles from the Earth. But, space weather can affect the Earth and the Solar System. When space weather is really bad, it can damage satellites and cause us on Earth to have electrical blackouts. The Sun always throws particles into space, and this is called solar wind. The Earth has an area of magnetic force that is called a magnetic field and is surrounded by gases called the atmosphere. The magnetic field and the atmosphere are our superhero protectors because they protect us from the solar wind blasts. Space weather can be harmful to us on Earth. If serious solar storms happen, eruptions, called coronal mass radiation can damage satellites we use for communication, cut-off electricity, and travel navigation. You can check space weather just like you check your local weather forecast.

2.2 The Cognitive Process Dimension: Bloom's Taxonomy

- **Remember:** Statements or questions request students to recall or recognize information from a text-source. Although the remember level is the lowest form of comprehension, this level is the building block that assists students in making cognitive text connections to the other parts of the text. Verbs: define, label, recall, show, and tell.

Example: Can you **define** space weather?

Differentiation Examples (Students):

- Read the selection and provide the response in a written sentence.
- Listen to a peer read the passage to provide an oral response.

- **Understand:** Statements or questions that request students to transfer memorized information to new information by seeking responses that go beyond memorized facts.

Verbs: classify, discuss, illustrate, rephrase, and summarize.

Example: Explain why space weather is considered as being bad for our planet.

Differentiation Examples (Students):

- Develop a paragraph that provides a contrast between the space weather and your local weather.
- Develop illustrations that contrast the differences between space weather and your local weather.

- **Apply:** Statements or questions that request students to apply, transfer, or use data to complete a procedure or task of either a familiar task or an unfamiliar task. Verbs: build, construct, model, plan, and solve.

Example: If space weather is predicted to interfere with your community, what **plan** could you have in place to be prepared to deal with this weather problem?

Differentiation Examples (Students):

- Write a letter to NASA requesting sample drawings of damaged areas in several countries caused by space weather.
- Create an analogy between space weather and normal weather.

- **Analyze:** Statements or questions that request students to break apart, classify, or make assumptions about information showing how the parts are related. The following components connect to analysis: distinguishing fact from opinion, finding evidence to support the author's purpose for providing specific information, and connecting conclusions with supporting information. Verbs: show, contrast, and demonstrate.

Example: Show the impact of space weather on the environment.

Differentiation Examples (Students):

- Investigate tasks NASA can perform to predict when space weather could damage Earth.
- Use the information identifying what NASA can do to develop a chart providing this information to display in the class.

- **Evaluate:** Statements or questions that request students to make an assessment, critique, or judgement based on a set of standards or criteria. Verbs: assess, compare, interpret, justify, and summarize.

Example: Can you **conclude** from the information in the text if NASA can control space weather.

Differentiation Examples (Students):

- Design a flowchart that outlines the components of space weather.
- Write a set of steps used to by NASA to explain space weather.

- **Create:** Statements or questions that request students to consider all components of a text to create or to design a new pattern that defines the students' prior knowledge and understanding of the information. Verbs: build, combine, discuss, plan, and solve.

Example: Using the information learned from the text, **describe** and construct your version of space weather. You may work in a group, and you may use a variety of materials to complete your response.

Differentiation Examples (Students):

- Design an illustration of the different problems space weather can cause Earth.
- Compose a rhyme, poem, or rap to advertise space weather and the problems it can cause Earth.

2.2.1 The Revoicing Procedure

The revoicing procedure allows the teacher to engage students by focusing on reciprocal oral exchanges that promote a deeper understanding of contextual concepts. Teachers can also restructure student responses so that students can hear their ideas expressed using accurate academic language, and accurate content responses. The example below uses the content from the *NASA Space Weather* text to demonstrate this procedure.

| |
|--|
| <p>Teacher: <i>May I have a volunteer to explain space weather.</i></p> <p>Student One: <i>The Sun’s surface creates space weather.</i></p> <p>Teacher: <i>So, you are saying that space weather is created from the Sun’s surface. Can you give more information about space weather?</i></p> <p>Student One: <i>Yes, that is what I am saying about space weather. Space can cause us problems here on Earth by causing us to have no electricity.</i></p> |
| <p>An Extended Conversation to Include a Different Student (Student Two)</p> |
| <p>Teacher Speaks to Student Two: <i>Restate in your own words your classmate’s explanation of space weather.</i></p> <p>Student Two: <i>NASA defined space weather as being a problem for us. Space weather can be a problem for us if we have blackouts and no lights. I understand what space weather is and I hope we never experience it.</i></p> <p>Teacher: <i>To add to your response, what are some other problems space weather can cause us in the United States? What information from the text helps you respond to my question?</i></p> <p>NOTE 1: The dialog can continue between the teacher and the student and has the potential for including other students in this dialogue exchange by asking different questions and statements about the text information.</p> <p>NOTE 2: The additional contribution from student two gives the teacher an opportunity to assess the students’ understanding of the text information.</p> <p>NOTE 3: This procedure allows practice of language skills that can assist English Learners with using language patterns.</p> |
| <p>Differentiation Examples</p> |
| <ul style="list-style-type: none"> • The teacher uses an extended text for students to read about space weather and basic weather found in the students’ communities. • The teacher assigns products such as a collaborative assignment to investigate and write a report about the different types of weather conditions. • The teacher assigns students to create art designs that show the progression and changes in weather patterns in our country over the last two years. <p>NOTE: The differentiation examples use a variety of student generated products that include reading printed material, writing reports, and providing illustrations. Therefore, considering the learning styles and academic levels of students.</p> |

2.2.2 Note Taking

The note taking guide includes space for an informational header, a listing of academic vocabulary terms, a column for writing notes, and a section for writing a detailed summary of the notes.

Note Taking Guide

| | |
|-----------------|----------------|
| Student's Name: | Date: |
| Subject: | Pages Covered: |
| Topic Covered: | |

Academic Vocabulary:

Instructions: Academic vocabulary terms should be defined and discussed before reading and discussing text information.

NOTE: This discussion of academic vocabulary provides sheltered instructional consideration for English Learners.

| Statements and Questions (Provided by the Teacher) | Student Responses to the Statements/Questions Provided by the Teacher |
|---|--|
| Provide a description of space weather. What impact would space weather have on you and your family? | |

Summary: Students are encouraged to use the responses presented in the response column on the right side of the note taking guide to provide a written summary that captures the most significant information related to the topic.

As students become expert note takers, the note taking guide can change to a note taking sheet that does not have as many guided scaffolds provided by the teacher for students to use. Students would then take notes by writing directly on the form to record information from either a text-source or a lecture, determine the topics to identify on the left side of the form following their note taking, and generate a summary from their notes. As teachers continue to differentiate instruction and encourage students to become critical users of information, students could form groups to compare and enhance their notes with additional information. Note taking discussions also allow students a safe space to practice oral and written language (Hutchison, 2020).

3. Study Overview and Methodology

This study was administered in an undergraduate three-hour literacy lecture course that included a field experience as a requirement for the middle-level initial teacher certification sequence at a Tier One university to answer the following question: Did a preservice teacher candidate enrolled in a content literacy course while seeking initial middle-level teacher certification find literacy strategies useful in the instruction of seventh-grade science students? The course was designed to include and demonstrate research-based literacy strategies that can be applied across content subjects in classroom settings. The undergraduate course centered around advocacy for engaged instruction for *all* students with instruction provided by the professor-researcher that included 1) instructor provided lectures and demonstrations of research-based literacy strategies; 2) in-class individual and

group practice of strategies and their application targeted to their content-area subjects; 3) field-based instruction for a group of five students from their assigned school setting; 4) self-reflection capturing of noticed student engagement, and 5) a collection of assessment artifacts that showcased students' academic growth and knowledge.

A qualitative case study research design was used as the methodology to collect data over fifteen weeks of instruction. Creswell (2013) defines a case study as an investigation over time of a collection of multiple forms of data to determine themes. This case study reports information collected from one participant, Rosa (pseudonym), who was a twenty-year old Hispanic junior-level student completing the requirements to become initially certified to teach middle-level science. The participant was identified through a convenience sampling (Creswell, 2013) based on a request for assistance, geographical proximity to the university, and plans to teach a middle-level subject (science). Rosa served as a student assistant in a seventh-grade science class for one day each week for fifteen weeks during the semester. She was assigned to teach a group of five students of varying language and learning needs in the seventh-grade science classroom for one hour each week. Although the data collected highlights one participant, additional information is included from the other twenty-one students enrolled in the course. The other twenty-one junior-level students ranged in age from nineteen years old to twenty-nine years old and represented White, Black, Hispanic, and Asian cultures.

The data collection consisted of one individual interview, one member check interview, two observations of the participant in the seventh-grade science class by the university professor-researcher, analysis of lesson plans developed by the participant, and analysis of artifacts produced by the seventh-grade group of five students in the science classroom. The interview focused on the instructional sessions with the students in the classroom settings by seeking the perceptions of the effectiveness of the instruction, how the participant conducted the lessons by introducing, practicing, and providing opportunities for the seventh-grade science students to apply the strategies in learning and retaining content information, and the procedure used to collect evidence used to monitor and assess academic achievement. The member check interview was conducted to verify accuracy in the content of analysis and to seek additional information. The two observations by the professor-researcher occurred during the third week and the twelfth week of the field experiences. The observation protocol included field notes describing the instructional environment, the structure and delivery of the lesson, and the preservice teacher candidate's interactions with the seventh-grade group of students in the science class. Data sources were collected and categorized into themes that provided the perceptions of the preservice teacher candidate regarding the effectiveness of the strategies in advancing the academic achievement of the students (Clandinin & Connelly, 2000).

4. Findings

As the semester started, the preservice teacher candidates wondered why they needed to take a class on reading in the content areas when they were preparing to teach a middle-level curriculum of various content areas. The professor-researcher faced this concern each semester and felt this was a legitimate question that needed an educational response that is demonstrated through instructional action. Therefore, the course was designed to provide presentations that addressed literacy information and strategies that would apply to teaching science, social studies, mathematics, English language arts and other content area subjects. Rosa, the participant in this study, entered her field experience with "expectations of all students being engaged in their learning and would be excited about learning science." Her first field experience visit alerted her to the reality that she needed to learn instructional practices that would assist in addressing the needs of language and academic diverse seventh-grade students in a science class. Her classmates found similar reactions from their student groups and one student enrolled in the university course said, "the students had difficulty understanding their text information and did not respond to any of my questions regarding their reading assignment." Another student in the class said that his students "did not know how to take notes and were not connected to the instruction." These comments prompted concern among the university students, and they voiced a need for them to provide the middle-level students with processes for gaining and retaining instructional information. The findings from this study indicate that the preservice teacher candidates experienced an instructional shift in their thinking about instruction that supports all learners. This shift in thought included the need to identify at least three literacy strategies, from the twenty their professor-researcher introduced during the semester, they could implement during their field experiences and into their service as a certified classroom teacher. The discussion of the findings gained from Rosa is provided along with additional information from the other twenty-one students.

The major theme that emerged during Rosa's interview was the need for collaboration. She felt she "needed to collaborate with the students' science teacher to understand the academic needs of the students in the group she was assigned because the students were not engaged, and she needed to gain assistance to learn ways to support

the students in her group.” The science teacher provided her with an instructional sequence for teaching science concepts and encouraged Rosa to use literacy strategies that could help the students accomplish enhanced achievement levels. In addition, the science teacher asked Rosa to design a series of lessons that would prepare her group for a virtual NASA visit with a scientist who would teach about space weather. Although Rosa shared that “the classroom presented an environment with commercial science posters, examples of student work samples, course objectives and standards, and other pictures,” the students were not engaged in learning science. Rosa also stated that “the class was arranged for conducting science experiments with tables that included a bank of laptops.” However, Rosa stated that

I realized I needed to develop my lessons with literacy strategies my students could learn to use in their science class and in their other content classes to assist them to become students invested in acquiring and retaining science concepts and information from their other content classes. I also found ways to use the laptops for instruction.

Rosa decided to plan her lessons to include an introduction that connected to the students’ backgrounds and to their funds of knowledge they brought to each lesson (Moll et al., 1992). Her introduction also included video clips, short stories, pictures, and other digital resources she hoped would spark interest among her students. Rosa used the three strategies of taxonomy questions and statements, revoicing, and note taking throughout her field experiences while continuing to demonstrate the use of each strategy with new information the seventh-grade science group were learning during Rosa’s instruction.

Throughout the fifteen weeks of field experiences, Rosa continued to use the three strategies and specifically used the strategies in preparation for the NASA virtual field trip, Rosa noticed the students were engaged in their learning of science concepts. She noticed the students were responding correctly to questions and statements she posed with added information from resources beyond their textbook. She also found their note taking sheets provided detailed summaries related to their new learning and that the students were using new and previously learned vocabulary in written and oral formats. Rosa noticed an increase in her group’s interest and in enthusiasm for learning more science concepts. Rosa was especially excited about the positive result of the NASA virtual field trip. She said that “her students listened to the presentation, engaged with interesting questions, recorded notes, discussed the information with their peers, and demonstrated excitement about learning about space weather.” Rosa had an exit interview with the classroom teacher at the end of her fifteen-week field experience. During this exit interview, she found her group of students had gained a twenty-point grade increase from 65 to 85. Rosa said to her professor-researcher “I was so delighted to know my group increased their grade averages and were now passing their science class.” During the professor-researcher’s visits to observe Rosa’s instruction, it was noticed that initially during the first observation the students were reluctant to respond to Rosa’s questions. During the second visit, it was noticed that the students were engaged in their instruction, were active participants in interacting with their peers, and seemed to be delighted with Rosa as their teacher.

Although the professor-researcher did not highlight the academic impressions of the other twenty-one course members who were enrolled in the content reading course, the students were asked to comment about their field experiences and below is a summary of their comments that were collected through the course survey.

- “Ok, now I completely understand why I needed to take a reading class even though I am preparing to teach social studies.”
- “Well, my group of students just collected the notes their science teacher provided each week. Their teacher gave them a vocabulary list with the terms defined and a list of facts to learn for tests. When I was assigned to teach my group, I started an approach for reading their textbook and provided the note taking strategy, I noticed they were listening to my presentations, listening to their peers responding to information, and taking notes. When I asked my classroom teacher about what he had noticed, he indicated an increase in participation and an increase in their test scores. I have learned that getting student engaged, allowing them to talk, and become responsible for gathering information in an individual format makes a difference.”
- “When I enrolled in this content reading class, I just knew it was going to be an easy go. I found early in the semester that the class was going to be challenging. But, I found the class to also be useful as I learned to teach social studies. I found the ways to engage students through their funds of knowledge exciting and I will use the strategies I learned with my future students.”
- “It is interesting to say I learned along with my students as I introduced them to literacy strategies. My students were thrilled to learn new ways to engage with their textbook and they were so excited to see an increase in their assessment scores.”

- “I used the annotation-of-text strategy with my language arts/English class. The students enjoyed learning ways to connect with the stories they were reading and they were so glad to see their test scores increase. They told me they were using the strategies I taught them in their other classes.”

The question used in this study (Did a preservice teacher candidate enrolled in a content literacy course while seeking initial middle-level teacher certification find literacy strategies useful in the instruction of seventh-grade science students?) can be answered as, *Yes*. The information provided from the participant, Rosa, and her classmates, in this study provided the documentation that supports the inclusion of implementing literacy strategies in the preparation of certifying middle-level content-area preservice teacher candidates.

5. Discussion

The professor-researcher observed Rosa in her field experience two times during the semester. During these observations, the professor-researcher noticed a professional growth in Rosa and her growth between observations indicated a positive shift in her performance and delivery of instruction. As the professor-researcher assessed Rosa’s lesson plans and student work artifacts along with the submissions of the other twenty-one students enrolled in the course, it was noticed that the preservice teacher candidates and the students in their assigned classroom groups achieved effective learning outcomes. Rosa and her classmates found that class lectures, assigned readings, peer group interactions, and the practice and application of the literacy strategies during their course at the university and before teaching in their assigned school-based classes provided the capacity to understand the importance of the content area reading class. Rosa often said, “I never realized a reading class would assist me in becoming an effective teacher.” According to Shanahan and Shanahan (2012), disciplinary literacy instruction should be embedded in all content-area instruction offered at the university level and implemented in content classroom settings.

Teacher educators who preparing undergraduate teacher candidates to become certified teachers should provide a lens into the practice and usage of literacy strategies. This lens should incorporate a significant introduction to literacy strategies that are discipline-specific in assisting preservice teacher candidates to acquire, retain, and apply strategies that can be provided in the instruction of classroom students. Wineburg, Martin, and Monte-Sano (2011) indicated the need for teacher educators to provide preservice teacher candidates with literacy strategies that will guide their future students in becoming effective in acquiring information. In addition, Wineburg and Reisman (2015) suggested that students in classroom settings should be equipped with reading strategies that will support content understanding.

The participant in this study, along with her classmates, provided evidence of an understanding and acceptance of the integration of content learning that includes literacy instruction and strategies. The findings from this study and the comments provided by the participant and her university classmates also provided evidence for the inclusion of literacy instruction in teacher education programs that certify middle-level teachers. As an indication of Rosa’s and her classmates’ instructional expectations during their field experiences, teacher education programs should encourage preservice teacher candidates to include literacy strategies into the instruction of the student they teach during their field experiences.

6. Conclusion

Instructional strategies for classroom and content use were introduced in 1946 with Robinson’s description of the Survey, Question, Read, Recite, Review (SQ3R) method (Stahl *et. al.*, 2023). This method was teacher directed with little mention of dialogic discussions, peer engagement, or consideration for diverse learners. The focus of literacy instruction currently is on disciplinary literacy strategies emphasizing critical thinking at higher levels of inquiry that encourages students to apply knowledge through peer discussions, written products, visual representations, and other forms of demonstrated learning (Shanahan & Shanahan, 2012). Currently, teacher candidates and in-service classroom teachers are encouraged to consider instructional formats that embrace each grade level of students’ funds of knowledge they bring to their classroom environments. As noted by Carnoy and Garcia (2017), kindergarten through twelfth students continue to need strategic instruction that will engage all students in effective and meaningful instruction.

Results of this study could assist professors of preservice teacher candidates at all levels of initial certification as well as professional development presenters for practicing teachers to consider including the implementation of literacy strategies. The professor-researcher learned from this study that a more intensive and broader investigation in determining the effectiveness of literacy strategies that are implemented by preservice teacher candidates into the instruction of diverse learners is needed. This study investigated, in-dept, one preservice teacher candidate who was enrolled in a content literacy course while becoming initially certified to teach middle-level science. Providing data from the experience of one student who enrolled in the content literacy

course and not from a larger representative sample of students in this type of course is a limitation. A recommendation for future investigations regarding the learning of students who enroll in a content literacy course would be to increase the number of preservice teacher candidate participants to capture the effectiveness of literacy strategy usage in each accountability content area (English language arts, mathematics, and social studies) along with other subjects such as art and music. In conclusion, considering the teaser at the beginning of this article provided by Benjamin Franklin (“*Tell me and I forget. Teach me and I remember. Involve me and I learn*”), you can use this teaser as a reminder that field experiences that incorporate engaged learning will *hook* classroom students and move them into a positive learning stance.

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