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Abstract

Teachers can use writing in three important ways to increase higher level thinking skills for all students. First, they must increase writing proficiency for struggling writers; second, writing can increase higher-level thinking, and third, writing can be used across content areas to increase writing fluency while fostering higher-level thinking.

The Role of Writing:

Increasing Higher Level Thinking for All Students

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MAE: Educational Psychology: Professional Development for Teachers

Research Paper

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Chapter 1

Introduction

Teachers teach, it's what we do. Some of us have known since our days as elementary students that we wanted to be up front, the one planning the lessons, handing out the stickers, and using the red pens. We remember favorite teachers, the ones who inspired us in 2nd grade to research beavers and write stories about their adventures, the quirky ones with the posters of Harleys and Bridgette Bardot who taught us the symbolism of the red pickle dish, and the ones with coffee stained shirts who challenged us to think, create and keep learning. And of course we remember the ones who bored us with slide shows of something or other, and lectures where we filled the margins of our worn notebooks with drawings of flowers, horses or perhaps our heads exploding. These memories stay with us, and these are all memories of teachers. Each of these people were teachers. They showed up, taught lessons, and gave tests. The difference between effective teachers and teachers that fail to inspire or motivate lies in where the system puts the emphasis; is the goal for a teacher to teach, or is the goal for all the students to learn? The divide between the two is wide, and as most teachers experience through years, months, or even weeks of teaching, the greater joy is in the learning.

The challenges teachers face today are staggering. They walk into a large class filled with a variety of students. Some may be on an IEP, some may have limited English proficiency, a few may be reading on a 12th grade level, others on a 3rd grade level and plenty in between. Hertberg-Davis and Brighton (2006) state that students of all abilities reside in classrooms; teachers are increasingly challenged to meet the needs of all students: high achievers, low achievers, and students with varying attitudes about

education. Willis and Harris (2000) argue that the cultural and linguistic diversity of students in k-12 classrooms will continue to increase. Whatever the trends, each student in each class is unique. They come from different backgrounds, with various emotions about the school experience and with distinct passions or interests. The task, or I should say challenge, of the classroom teacher, is to reach all of the students where they are and to advance their learning.

Teachers also struggle with time. They are expected to cover history from Early Americans to the Civil War in 9 short months, while building reading, writing, math, and character. Standardized tests loom and they have nightmares about falling short because their students haven't memorized the correct facts.

Along with time and diverse learners, teachers also struggle to assess what students have learned and to use that information to guide their instruction. In order to accurately plan, teachers need to know what their students have absorbed and with which concepts they are struggling.

A final challenge teachers face is fostering critical and creative thinking in their students. We cannot create robots who recite facts and information without connecting and evaluating what they have learned. Today's students will be facing careers that haven't been invented yet. Teachers are charged with preparing students for a world we can barely imagine. Students need to be aware of what they know, and what they don't know, and to use this awareness to build their knowledge. They need to learn how to take data they encounter and transform it into their own knowledge. In *Democracy and Education* John Dewey asserts a problem that still challenges education today,

If he (student) cannot devise his own solution (not of course in

isolation, but in correspondence with the teacher and other pupils) and find

his own way out he will not learn, not even if he can recite some correct

answer with one hundred per cent accuracy. We can and do supply ready-

made "ideas" by the thousands we do not usually take much pains to see

that the one learning engages in significant situations where his own

activities generate, support, and clinch ideas – that is, perceived meanings

or connections.

Dewey, 1916, p.154

These challenges became very real to me during my 9th year of teaching. The first

day of school I stood facing a room comprised of six different ethnic groups, 3 students

with limited English proficiency, and reading levels ranging from 2nd grade to 12th grade.

And then there was Jack. He came to me at the beginning of his 5th grade year with a

chip on his shoulder about education. He had been labeled with a learning disability, was

considered a discipline problem, and previous teachers referred to him as lazy. Jack

rarely volunteered information and would finish assignments as quickly as he could,

thrilled to be done. Britsch and Heise (2006) argue that teachers need to believe that all

students can learn and a variety of styles of expression should be accepted to meet the

needs of all learners in the classroom. So here I was, staring at diversity. I believed all of

the students could learn, but the gap between belief and action seemed daunting.

Lucky for Jack, I had the opportunity to participate in the Iowa Writing Project

the summer before he walked through my door. I was determined to try something new I

had learned in my class: multi-genre research projects. We began the year talking about

Native Americans, and my goal was for the students to understand the uniqueness of each culture and how the resources available to them aided in the development of each distinct culture. In order to do this, I allowed each student to choose a different tribe. We brainstormed a list of what information they would need to find, and I gave them choices of how they would present their final results. Jack made his three choices: a journal about living with this tribe for a day, a "how to" manual for building their housing, and a poem relating to an aspect of their culture.

As students collected information they turned in daily logs with notes about the information they had learned that day; Jack soon realized I was not going to let him get away with putting down his stereotypes for answers. Although he wanted to add teepees and scalping, he was guided to pull out the correct information and his daily journal got more detailed and accurate. When it came time to complete his work, Jack had the confidence to use his knowledge to create a fantastic project incorporating a variety of writing styles. Jack and I had many writing conferences and these conferences allowed me to gain insight into his thought process and assist him in areas where he needed help. Jack was motivated and really tried to imagine what would go into a daily schedule of this tribe and how his life would be different. Most importantly, he learned. He jumped in during class discussion, correcting others on what a house made of waddle and dab would look like or what materials would be needed. When students presented their projects to their parents and the 3rd graders at our school, Jack had a ball showing off what he had learned. A highlight came a month after the project; the class was discussing the early colonies and their differences. Jack piped up about the differences in climates and resources and how this would have contributed to their various lifestyles. Jack had

made a connection. He had remembered details and analyzed why something had occurred. I wanted to jump up and down, but being the professional I am, I settled for a high five.

Jack had learned; he had taken the facts and information we had studied and internalized them. Although Jack continued to be a challenge the rest of the year, and I'm sure I failed him on many occasions, his success with this project left me wondering what had gone right?

Research Question

Jack and many of my other students determine my essential question for this study: How can writing be used to meet the needs of diverse learners and foster higher-level thinking skills across content areas?

Meeting the needs of diverse learners is a crucial task in schools today. As Hertberg-Davis and Brighton (2006) state, diversity is increasing and the achievement gap between minority students, ELL students and students with learning disabilities needs to be addressed. This paper will examine how writing can be used to meet the needs of individual students. It will also explore the importance of writing and the effects that different types of writing have on learning. Finally, it will suggest areas for more research and provide recommendations for teachers to implement in classrooms that will benefit all students.

Significance of the Problem

Teachers can use writing in three important ways to increase higher level thinking skills for all students. First, they must increase writing proficiency for struggling writers;

second, writing can increase higher-level thinking, and third, writing can be used across content areas to increase writing fluency while fostering higher-level thinking.

First, writing proficiency for all students is essential. It is important not only for academic success, but also for success in life. In 1996 The National Center for Educational Statistics released a report stating that writing is important in all stages of life. Students need to learn how to express their ideas in a clear, organized manner starting from an early age.

Today's business leaders agree that writing is a crucial element for success in the work place. The National Commission on Writing surveyed 120 large business corporations and found that writing is a "threshold skill" for employment and promotion. Seventy percent of the corporations that responded to the survey reported that two-thirds of their salaried employees had some responsibility for writing (See appendix 1).

In order to meet the writing needs of all learners, Knipper & Duggan (2006) & Bangert-Drowns, Hurley and Wilkinson (2004) all recommend that adaptations for individual students need to be made. In 2003 Graham, Harris, Fink & MacArthur surveyed $1^{st} – 3^{rd}$ grade teachers and found that 20% made no adaptations for struggling writers and another 24% reported that they only made 1 or 2 adaptations. Teachers need to be involved in the writing process with their students by giving consistent feedback, modeling, and providing clear guidelines for each writing assignment.

Second, higher-level thinking is a significant goal of our education system today. Students need to be moved beyond rote memorization to deeper understanding of content. The role that writing can play in encouraging students to manipulate information in new ways needs to be explored. Nagin (2006) argues that writing is essential for "success in

and out of school" and can support learning in all disciplines (Nagin, p. 5). Langer and Applebee (1985) believe that Language Arts teachers have recognized the benefits of writing for years. They believe evidence has shown that activities involving writing increase comprehension, connections and recall better than activities that rely only on reading and studying.

Third, teachers today experience extreme pressure to meet high stakes assessment standards and develop literate citizens. Writing across content areas can support teachers in this endeavor if the role of writing moves beyond language arts classrooms. Paivi (1998) argues writing can increase topic understanding, evolution of thinking and critical thinking skills. Baxter, Basas & Glaser (2001) also argue that by using writing in content areas, teachers are able to monitor and assess student learning. Smith and Hiles (2006) argue that students from an early age need to develop the different contexts, purposes and possibilities for writing.

Definition of Terms:

> *At-Risk Students* are students that are in danger of academic failure or dropping out of school do to inadequacies in the home, school or community.
>
> *Democratic Concepts* refer to the values of a democratic society that protects the rights of all citizens and believes that individuals should be active participants in their countries government.
>
> *Higher Level Thinking Skills* Educators are familiar with Bloom's taxonomy and refer to it often in discussing higher-level thinking skills. These mental processes include evaluating, analyzing, applying and synthesizing information, for this paper they will also include democratic values.

Social Justice refers to the idea that individuals and groups experience fair

treatment in society.

Teacher Adaptations are changes that teachers make to the lesson, classroom,

materials or support to meet the needs of the students in their classes.

Writing Genres are categories of works that share a common purpose, structure,

or content.

Organization of Paper

This paper will be organized into 5 chapters. Chapter one has outlined the

challenges teachers face when meeting the needs of all the students in their classrooms.

It has posed the question this paper will be discussing: How teachers can use writing to

increase higher level thinking skills for each student in their class. Chapter two will

discuss the challenges of four groups whose writing scores fall behind those of their

peers: students who are culturally diverse, poor, have limited English proficiency or have

learning disabilities. Chapter three will explore the benefits of writing on learning,

critical thinking and democratic values as well as using different genres across content

areas to increase higher level thinking skills. Chapter four will examine the successful

strategies used to increase writing fluency for diverse learners and the building of higher

level thinking for all students using these strategies. These strategies will be explored

under a framework that examines the role of the teacher, the role of the assignment and

the role of the classroom. Finally, chapter 5 will suggest practical activities teachers can

implement in their classrooms and will offer recommendations for future research.

Chapter 2

Using Writing with Diverse Learners

Overview

Chapter one outlined the challenges teachers face as they struggle to meet the needs and curriculum demands of all students in their classroom. Chapter two will discuss specific challenges faced by struggling writers and adaptations teachers can make to assist them. Troia (2006) states that these challenges can often overwhelm teachers and they feel unprepared to meet the needs of their students. This chapter will specifically explore four types of diversity commonly found in classrooms today and the writing challenges faced by students who are culturally diverse, who live in poverty, who have limited English proficiency or who suffer from learning disabilities. This chapter will not address all the teaching methods that are appropriate for all types of students. It will, however, explore appropriate writing strategies and teacher adaptations that may be of benefit to all students and can help teachers assess student knowledge and then use student writing as formative assessment to guide instruction.

Subsequent chapters will explore the possible benefits for all students of writing across content areas and will give suggestions for implementing strategies in the classroom.

Adaptations for Culturally Diverse and Poor Students

This section will show the discrepancies of writing success between white middle class students and students who are culturally diverse or living in poverty. Although these are two distinct differences, many features overlap and these two populations are often combined in school settings. This section will conclude by exploring two studies

that looked for solutions to the writing challenges of culturally diverse and poor students. This section will also outline suggestions these studies make for improving the writing and communication skills for these at-risk students.

Scope of the Problem

Currently in the United States 13 million of our 73.9 million children live below the federal poverty level (Fass & Cauthen, 2007). According to the 2007 NAEP report, students who qualify for a free lunch averaged 24.86 points behind students who are not eligible for free lunch on the grade 8 standardized writing assessment. Students who qualified for reduced lunch averaged scores that were 14.3 points below students who did not qualify for free or reduced lunches. These gaps indicate that writing strategies need to be addressed for students living in poverty.

Racial and ethnic diversity in the United States has grown from nine percent of the child population in 1980 to twenty-one percent in 2007. It is estimated that by 2020, one in four children in the United Stated will be of Hispanic descent (Childstats.gov, 2007). These minority students also struggle to meet the skills required on standardized writing assessments. According to the 2007 NAEP report on 8th grade writing, the average national score for white students was 163.67, while black students scored on average 141.16 points. Hispanic students and Native American students also scored below white students with an average of 141.59 points and 142.82 points respectively. Asian American students and Pacific Island students came in ahead of white students at 167.25. These scores show that the achievement gap in writing needs to be addressed by schools and educators.

Recommendations

Over the years educators have given possible reasons for the existence of the achievement gap in writing and made several recommendations to alleviate the writing achievement gap between culturally diverse students, poor students and their white middle class peers. Knapp, Shields, and Turnbull (1995) believe teaching in at-risk settings is often reduced to repetitive practice and mastery of discrete "basic" skills. Ball (2006) also argues that minority students feel disconnected from the curriculum and their previous life experiences are not valued. The focus on specific skills leaves less time to foster creative or critical thinking.

Hawkins (2006) believes that teacher support during the writing process is vital. Troia (2006) agrees and recommends that teachers can address issues that challenge students through teacher-student conferences, teacher-directed mini-lessons, peer tutoring, and by differentiating feedback on individual student's work. Wells (2006) adds that students will increase writing skills when they are participating in the writing process with their teachers. Teachers can use student writing to assess where learners are in their thinking and understanding of topics (Skeans, 2000). Knipper and Duggan (2006) explain that, "mastery of content is demonstrated not only through reading, but also through writing." (p.462). Using writing to diagnose student learning can allow teachers to plan lessons appropriately, reaching students where they are.

Ball (2006) and Gamill (2006) both noted classroom organization as a key component in engaging culturally diverse students. Gamill states that teachers need to be aware of the social nature of writing. Ball emphasized the importance of creating a community. Ball believes students need to be involved in group work and have the

opportunity to challenge and explore each other's ideas as part of the writing process. Langer and Applebee (1987) agreed by stating that students benefit when allowed to share and discuss their thoughts and ideas as part of the process. This encourages them to sharpen their language and thoughts.

Research

Janish and Johnson describe a research project carried out in 2003 at a school with an at-risk population. At the time of the study, the school population was 65% Hispanic, 21% African American, 11% White and 3% Asian. The study examined the effects of the CLICK Project (Connecting Literacy with Content Area Knowledge). The goal of the program was to introduce vigorous core knowledge into the curriculum while integrating challenging literature and writing within the content areas. Students were asked to keep notebooks and journals, use KWL techniques, and write to demonstrate their knowledge and learning. Teachers were able to use student writing as formative assessment and one-on-one writing conferences gave teachers the opportunity to deal with individual student needs. At the end of the study teachers felt that the students demonstrated increased motivation, were able to make connections across texts and showed increased capacity to critique material. To Janish and Johnson an important aspect of the success of this curriculum was that teachers were able to use writing to address students' individual needs.

In 2001 Langer conducted an observational study to explore why some schools seemed to be beating the odds on the national writing assessment. Her study observed 25 schools, predominantly poor and culturally diverse, over a two-year period for patterns in curriculum and instruction. Fourteen schools were performing higher than schools with

similar demographics on standardized writing assessments. The other schools were labeled as good, but were performing more typically on standardized writing tests. Langer found six common characteristics among the schools whose students performed higher than expected in respect to their demographics on standardized writing assessments. The six commonalities are outlined and explained below and also in appendix 2.

Combined Approach to Skill Instruction

In the higher performing schools Langer studied, teachers taught basic skills through a combination of approaches. Students were instructed in basic skills such as spelling, grammar and handwriting using separate mini-lessons, exercises in applying the skills, and students were expected to integrate these skills into purposeful writing assignments such as letters, reports or poems.

Revised Literacy Curriculum

The over-performing schools revised their curriculum to incorporate the skills and content assessed by the standardized tests into their regular curriculum. By deconstructing the test, the teachers gained a better understanding of the literacy skills students were expected to know. Teachers then applied this knowledge to the curriculum they taught on a daily basis as opposed to just teaching lessons on test taking skills.

Learning Connections

In the over-performing schools students were encouraged to make connections across subject areas and with their lives outside the school. Students' background knowledge was brought into the classroom through discussion and writing assignments.

Clear Expectations and Clear Evaluations

Teachers in the over-performing schools had clear expectations and clear methods of evaluation for writing assignments. They often used rubrics to assess writing and discussed them with students prior to using them. Students were encouraged to monitor and reflect on their own performance.

Conceptions of Learning

Teachers in the over-performing schools encouraged deeper understanding and generation of new ideas versus teachers who focused on increasing knowledge and then moving on to other concepts. The teachers in the average performing schools saw learning as recall of names and definitions and failed to move beyond or elaborate.

Classroom Organization

Classrooms in the over-performing schools were organized to encourage collaboration and community. These teachers focused on and valued shared learning as opposed to individual thinking.

Langer believes that these six characteristics worked together to develop the literacy skills of the students at these schools, but recommends more research to discover causality. Langer's study gives clear evidence that with appropriate teacher adaptations students who are challenged by cultural diversity or poverty can increases their writing proficiency.

Adaptations for English Language Learners

This section will highlight the challenges that ELL (English language learners) face in the writing classroom. It will outline possible suggestions to improve writing skills for these students and research that can support writing growth in these learners.

Scope of the Problem

ELL students are a growing population in the United States. In 2006, 20% of school age children spoke a language other than English at home and 5% of school age children had difficulty speaking English (Childstats.gov). The educational needs of these children are not being met. They comprise the highest high school dropout rate in the United States. In 2000, 31.7 percent of ELL high school students attending school in New York dropped-out (Athiappan, 2002). In Nevada, in 2004, 45% of ELL students failed to meet the AYP standards set by No Child Left Behind (United Way of Southern Nevada's Community Assessment, 2005).

Recommendations

Many educators have given examples of challenges ELL students struggle with and recommendations for dealing with these problems. Short & Fitzsimmons (2007) believe there are three prevalent challenges when working with English language learners: identity, engagement, and motivation. Despite these challenges ELL students should still be expected to write and can benefit by gaining deeper understanding of topics during the writing process. They recommend ELL learners who have acquired basic skills be involved in the writing process. Writing should be used to predict, summarize, brainstorm, draft, edit and publish. These skills allow students to participate in higher level thinking skills that are crucial in high school and beyond.

Shorts and Fitzsimmons argue that more training is needed for teachers to understand the process students go through in learning second languages. This paper will give a few suggestions but certainly recommends that schools develop adequate teacher support and professional development to assist ELL students (Fitzgerald, 2006).

Hill and Flynn (2006) note that English language learners are often asked to respond to lower level questions. This does not develop their higher-level thinking skills or address engagement and motivation. By encountering writing prompts and using graphic organizers, ELL students can be involved with higher level thinking activities. Teachers need to build on a student's ability by accepting one or two word answers or nonlinguistic representations initially and then going to sentences with prompts such as: What would happen if. . ? and Why do you think . . ? By doing higher level thinking within content area writing, students will be more motivated to explore the writing process (Short & Fitzsimmons, 2007).

Another recommendation that Hill and Flynn address is the importance of focusing on effort. They believe that a strong belief in effort will increase motivation. Teachers need to verbalize and acknowledge the effort it takes to learn new subject material and to learn it in the context of a new language.

Rance-Roney (2008) stresses the importance of creating communities in the classroom that value the experiences and shared knowledge of ELL students. To assist two Vietnamese brothers who had recently immigrated to the U.S., she designed The Culture Share Club. This was a small group of students who met to create group projects relevant to the topics being discussed in her high school English course. The brothers participated in the groups and could contribute artwork to the presentations. During her observations she noticed that the students became more engaged and their English expanded, as did their social network.

Research

Franklin and Thompson (1994) conducted an observational study of a bilingual Native American student's written and visual works. They conclude that by paying attention to the written and visual works of the student they were able to understand her thought process and thinking skills. By exploring a variety of genres the student used, Franklin and Thompson gained a comprehensive view of her interests and knowledge. Franklin and Thompson urge teachers to respect all meaning-making processes of their students.

The use of technology is another adaptation to assist ELL students with writing that can be supported by research. Two separate studies were conducted allowing the use of computers for word processing. In 1993 Silver and Theodore looked at 66 high school beginning English students. The word-processing group showed greater improvement in the quality of their writing. Lam and Pennington conducted a similar study in 1995 in Hong Kong among native Cantonese speakers writing in English. The study took place over one year; they evaluated 18 compositions for each student considering content, organization, vocabulary, language use and mechanics. The computer group scored significantly better in all aspects except content, which had a nearly significant result.

Olson and Land (2007) conducted a study over an 8-year period from 1996 – 2004 in California. This study looked specifically at the Pathway Project, which focuses on the use of cognitive strategies to teach reading and writing to English language learners. Fifty-five teachers were consistently involved in the study across 13 schools from grades 6 - 12. Of the students involved in the study, 93% spoke English as a second language and 69% were designated as Limited English Proficient. After being exposed to the

cognitive strategies approach which focused on high expectations, modeling and guided

practice, using a variety of strategies, and creating classroom communities for learning,

treatment groups performed significantly better on GPA, standardized tests, and high-

stakes writing assessments than their non-treatment peers.

Outlined below are the core beliefs of The Pathway Project and how they were

implemented into the classrooms.

High Expectations

All students were treated from an early age as if they were going to college and

received a rigorous and exemplary curriculum.

Cognitive Strategies

Three types of knowledge, declarative, procedural, and conditional, were

emphasized with the students. Declarative knowledge encouraged students to be able to

identify what the strategies for reading and writing were. Procedural knowledge was

putting the strategies to use and conditional knowledge involved knowing when and why

to use the strategies. These strategies were considered a tool kit that the readers and

writers could draw from. There was not a linear sequence to teaching the strategies,

teachers based these decisions on the needs of their students. Strategies included such

skills as planning, goal setting, tapping prior knowledge, visualizing, monitoring,

revising, reflecting, and evaluating, among others. Teachers modeled these strategies and

gave students opportunities to practice these strategies in authentic writing assignments.

Classroom Communities

Students in the Pathway Project were encouraged to work together in a collaborative environment to share ideas and discuss assignments. Students would often share their writing with others and expect to give and get feedback from their peers and their teacher.

Olson and Land believe the evidence clearly supports teaching ELL students specific strategies in conjunction with meaningful writing assignments to help them grow as readers and writers.

Adaptations for Students with Learning Disabilities

This section will discuss the prevalence of learning disabilities within school settings today, and the writing challenges students with learning disabilities face. It will highlight recommendations that may assist these learners and research based approaches that can increase writing success for students with learning disabilities.

Scope of the Problem

The Coordinated Campaign for Learning Disabilities describes a learning disability as a challenge with processing, receiving, or expressing information. They estimate that one in seven people suffer from learning disabilities. In 2002, 2.9 million children were receiving special education services for learning disabilities (24th Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act, 2002). Students with learning disabilities often struggle in school. According to the 24th Annual Report to Congress on the Implementation of the Individuals with

Disabilities Education Act, in 2001, 27% of children with learning disabilities dropped out of high school. We are not meeting the needs of these students.

Recommendations

Educators have observed the challenges that students with learning disabilities face in the classroom; they have also made recommendations for teachers to advance the writing abilities of these students. Daniels, Zemelman, and Bizar (1999) believe that despite the differences that abound in the classroom, students with varying abilities are all capable of writing. The quality of the writing will differ, but all students should and can write often (Janisch & Johnson 2003).

Graham, Harris, Larsen (2001) and Troia (2006) state there are two common challenges that students with learning disabilities face: being overly concerned by basic skills such as handwriting, spelling, and grammar; motivation; and understanding the planning process of writing.

Rhodes and Dudley-Mahrling (1988) state that students who have experienced failure in school often believe they cannot write, which contributes to their lack of motivation to write. They recommend that teachers focus on the meanings of the ideas the students are expressing, while choosing one or two skill areas for improvement. This can alleviate fears that limit the length and quality of student writing, allowing freer expression and a better understanding of the students' thought processes for the classroom teacher.

One common adaptation that teachers can make to address students' fear of spelling, handwriting and grammatical errors is to allow the use of technology. Students feel less overwhelmed by spelling and handwriting, and revision is easier with the aide of

a computer (Troia, 2006). Troia and Graham (2003) do argue that explicit instruction in handwriting and spelling, especially during the primary grades, will increase speed and accuracy for students with learning disabilities.

Teachers need to find a balanced approach to skill instruction. Teachers should tailor mini-lessons and conferences to meet the needs of each student and extra teacher support should be given to students who lack critical skills. It is important, however, to focus on one or two skills at a time. Teacher adaptations can assist students in dealing with their specific struggles and increase their confidence in writing (Troia, 2006 & Graham, Harris, & Larsen, 2001).

Lack of student motivation to write can be addressed in several ways. Graham and Harris recommend that students be involved in choosing the topics for writing; too often students with disabilities are not involved in writing choices. They are told what to write about, the pace at which they should write and how to revise what they have written (Graham & Harris, 2005). Nolan (2007) agrees that when students are given choice within the writing process it will elicit positive emotions and a better product. Langer and Applebee (1987) argue that teachers should not exert too much control over the process. They believe that for writing to be effective in the act of reasoning and learning, students should be allowed to have ownership of the process and be able to express thoughts, questions, and emotions about the topic, as well as reflect often.

Graham, Harris and Larson (2001) explain that another way to increase student motivation is to involve students in authentic and meaningful writing activities. They observe that writing connected to content or personal experience elicited longer and more meaningful text from students. Another important aspect of increasing motivation is

creating a supportive classroom community that involves sharing of writing and peer collaboration. A final aspect of increasing student motivation is the attitude of the teacher. It is crucial that teachers believe that each student is capable and set high, realistic expectations for each student.

Research

Englert, Raphael, Fear, and Anderson (1988) conducted a two year study to explore the metacognitive knowledge of students with learning disabilities compared to low-achieving and high achieving peers in regards to the writing processes needed to create expository writing. They concluded that students with learning disabilities were less aware of the steps involved in the writing process and had difficulty organizing and grouping ideas.

In 1993 Danoff, Harris, and Graham found the students writing performance improved after they were given specific lessons on planning strategies.   They focused on strategies that were specific to certain writing genres. For example, they taught students to use the TREE method when writing a persuasive essay. The TREE method asks students to **T**ell what they believe, give three or more **R**easons, **E**xplain the reasons and **E**nd it. These explicit strategies gave students the tools to plan for specific writing activities. Graham and Harris (2005) used these strategies in conjunction with peer support and found that students were able to transfer their strategies to new writing tasks more easily when they discussed their ideas with a peer prior to writing. Troia (2006) also believes that struggling writings need to have tools such as graphic organizers or pictures available to guide them in the planning process. By being aware of this challenge

teachers can plan instruction that supports struggling writers and allows them to focus more on content.

Englert, Garmon, Mariage, Rozendal, Tarrant and Urba (1995) conducted a two-year study to determine the effectiveness of the Early Literacy Project with students who had mild learning disabilities. This literacy program was based on five ideas of teaching and learning: the involvement of students in contextualized literacy activities, the development of learning-to-learn strategies, classroom dialogue about literacy, teachers responding to individual learners in their zone of proximal development based on dynamic assessment, and finally, creating a community of learners in the classroom.

Contextualized Literacy

The Early Literacy Project involved students in using reading and writing activities that were connected to the curriculum and to their life experiences. Activities were meaningful and purposeful for the students.

Strategies Instruction

Specific strategies taught helped students increase independence when involved in reading and writing activities. Teachers modeled these strategies in their own reading and writing activities and discussed with students what strategies they were using, as the teachers were involved in their literacy activities.

Classroom Dialogue

Social interaction was encouraged and students were expected to share their ideas and thoughts about the literacy process. Students discussed what strategies they were using and would model for each other how each strategy would look or work.

Teaching Responsively

Teachers based their instruction on the needs of their students using student performance as a guide. Teachers designed mini-lessons around the needs of their students and scaffolded learning by incorporating the use of word banks, guides for text structure and varying student roles in the classroom.

Community of Learners

Teachers encouraged collaboration and participation. Students shared oral and written texts on a regular basis and teachers encouraged students to work together to read and write. Teachers gave up some control to students and allowed them to make more choices in their literacy activities.

Englert et. al (1995) discovered that students in the treatment group scored significantly higher in accuracy and fluency on two writing tests, with the students of experienced ELP teachers scoring higher than students of the first year implementation teachers. The students of the first-year implementation teachers still scored considerably higher than students of the control group teachers. The students of the control group teachers made little progress from pretest to posttest. Englert et. al (1995) believe the comprehensive nature of this program led to its success and encourage an extensive change in literacy education as opposed to adding one or two strategies to improve literacy education.

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Summary

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Many recommendations and research-based approaches for increasing writing proficiency with diverse learners were discussed in this chapter. This chapter has demonstrated that different types of learners can benefit from the use of specially

designed strategies. Teachers need to be aware of these strategies that permeate their teaching, the assignments they give and the structure of the classroom. Key components of this chapter demonstrate that combined strategies including responsive teaching, student goal setting, teacher modeling, balanced skill instruction, authentic purpose and audience, teacher flexibility, student collaboration and peer support are essential in building writing skills for all students. Although this list is extensive and may seem overwhelming to educators, chapter three will outline the benefits and value that writing has in supporting learning for all students.

Chapter 3

Using Writing to Increase Higher Order Thinking Skills

Overview

Chapter two outlined the challenges that students of varying abilities face and outlined how educators can assist these students. The chapter gave recommendations for appropriate teacher adaptations to support these students so writing can be successfully incorporated into every classroom.

Chapter three will outline the benefits of using writing with all learners. Romano (1995) believes that writing is crucial for building thinking skills, developing social skills, and fostering in students an awareness of their place in society. Writing gives students a chance to practice their thinking and organize information. This chapter will specifically explore how writing expands the use of higher level thinking skills through increasing recall and understanding of content knowledge, applying critical thinking, and internalizing democratic concepts. These thinking processes build on each other. Knowledge of topic is essential before students can analyze, evaluate or synthesize. Using these skills allows students to make connections to their world, becoming aware of their place in the greater social structure. Applebee stated, "Different writing tasks are likely to produce quite different effects on learning" (Applebee, 1984, p.586). The final section of chapter three will explore using writing within different content areas and the benefits that various writing activities offer students.

Using Writing to Learn

Educators have argued that building content knowledge and understanding is an important step in developing higher order thinking skills. Students need to increase

content knowledge in order to feel comfortable analyzing or making evaluations. Writing can help students organize and remember new information. This section will highlight recommendations that educators have made as well as research that support using writing to enhance learning.

Recommendations

Applebee (1984) asserts teachers believe writing contributes to the thinking process in four ways. Applebee outlines these four areas and explains that more research is needed to solidify their importance. First, writers benefit from the permanence of the written word as it transcends time and space. This permanence allows readers to reflect on what has been written and to rethink or rewrite if needed. Second, writing demands certain explicitness from writers. Writers are forced to express thoughts clearly so their readers will understand their meaning. Writers must be able to relate to their readers and express their ideas in a way that is relevant to their audience. Third, Applebee further contends that writing promotes organizing and thinking through new ideas. Finally, Applebee asserts, writing is active. Peterson (2007) agrees that writing forces writers to think through information, reason deeply and explore their ideas. Bangert-Drowns, Hurley & Wilkinson (2004) state that writing can support meta-cognitive strategies and support cognitive learning.

Research

Langer and Applebee concluded in their 1987 study that, the more content and information is "manipulated" by the students, the more likely they are to be able to recall this information and show deeper understanding. They explained that writing responses to short answer study questions typically found in textbooks, lead to short term recall.

When students in the study were asked to use analytical writing, they achieved deeper understanding and longer retention. Langer and Applebee assert that this kind of writing requires more in-depth reasoning because students are asked to rethink and transform their knowledge.

In their study, Langer and Applebee examined four different tasks and their effects on student learning. They examined the following:

1. Reading and studying, with no writing involved

2. Reading and answering comprehension questions

3. Reading and summary writing

4. Reading and analytic writing

They conclude that tasks, which involve writing, lead to increased and more sustained recall. Tasks requiring analytical writing result in more complex connections than summary writing. These findings support their theory of a positive connection between writing and learning. However, Langer and Applebee did find that if students were familiar and comfortable with the content prior to the reading, the writing assignments did not appear to have significant effects on students' ability to recall information.

Bangert-Drowns, Hurley, and Wilkinson (2004) created a meta-analysis of 21 Writing-to-Learn studies. Only 3 of the 21 studies used in the meta-analysis involved creative writing such as poetry and stories. Their review of the studies noted that 75% had a positive effect and enhanced learning. They found that longer writing tasks had smaller outcomes than did shorter writing tasks. They hypothesized that this could be related to

motivation. Therefore, they caution that, "writing can be expected to enhance learning in academic settings but it is not a potent magic," (p.44). Simply adding writing into the curriculum will not always increase learning. Bangert-Drowns et al. observed that contextual factors impact the influence of writing on learning in the classroom. They recommend that teachers pay close attention to student needs in order to develop the best writing-to-learn strategies for their classrooms.

<center>**Using Writing to Increase Critical Thinking**</center>

Another benefit that educators and researchers have discovered is that writing can strengthen critical thinking skills. Teachers strive to move their students beyond rote memorization into the realm of critical thinking. This section will define critical thinking and outline recommendations for using writing to increase and promote critical thinking in the classroom as well as research that supports the use of writing to build critical thinking skills.

Recommendations

The Foundation for Critical Thinking defines critical thinking as, "The art of analyzing and evaluating thinking with a view to improving it." (Paul & Elder, 2008, p.2) They argue that critical thinking requires individuals to question, make conclusions, interpret information, solve problems and communicate effectively. The Foundation believes that all students need to be involved in activities that build critical thinking. They argue that writing gives the author a chance to practice their thinking and use skills such as questioning, making inferences, and arguing points of view.

Gamill (2006) claims that writing allows students to "use a variety of problem solving skills and thought processes, fostering critical thinking skills" (p.754). He also

contends that it is crucial for informal writing processes to be developed and practiced in the elementary school. This will allow students to sharpen their communication and thinking skills before high school.

Research

Quitadamo and Kurtz (2007) looked at the effects of writing on critical thinking with general education biology students. This study showed that students who were involved in weekly essays, as opposed to weekly quizzes, improved their critical thinking skills, specifically analysis and inference, over a nine-week period. The writing in this study was done collaboratively and the act of writing was seen as a social process. They did note that this study did not significantly modify students' evaluation skills. Quitadamo and Kurtz conclude that writing should be used to hone critical thinking skills from a young age so that these skills are developed prior to students arriving at institutions of higher education.

In 2004 Wallace, Hand, and Yang examined the effects of a Science Writing Heuristic in 7th grade biology classes (this method will be explained later in this chapter). Their study concludes that students who use this method will perform better on conceptual questions than students who do not. The method shows no difference on multiple-choice questions related to basic knowledge. Using this method allows students to see the link between the questions they ask and the evidence they need to answer them. It also encourages a deeper understanding of the language used in biology. When students write for their peers it causes them to break down the language they are using in ways that their peers are able to understand and allow for greater learning (Meltzer, 2001).

Using Writing to Increase Democratic Concepts

Educators have made recommendations to increase democratic concepts in student thinking. They believe one objective of education is to enable children to participate in a democratic society. To participate effectively, individuals need to be able to communicate their ideas, evaluate their ideas and other's and finally, respect other individuals' rights to have opinions and ideas of their own. Students need to understand they are part of a diverse society and allow room for listening to a variety of opinions. This section will explore the social nature of writing and how participation in writing activities that promote critical literacy can enhance internalization of democratic concepts in students. Writing gives students a chance to apply democratic ideas to their lives.

Recommendations

To participate effectively in a democracy, individuals must be able to express their ideas clearly and make meaning from others' ideas. Comber, Thomson, and Wells (2001) believe that in order for students to meet this objective, they need to practice a variety of literacy activities. These skills will give students the tools to become active and aware citizens. Aware citizens focus on their schools, neighborhoods, communities, or governments and understand how policies and procedures can be implemented or changed. Stotsky (1990) argues that writing is a direct way for citizens to participate in their government. She believes that students should be involved in this type of authentic writing in their classrooms. She contends that students can use writing to personalize civic relationships, obtain information, provide information, evaluate public services, or argue a position.

Behrman (2006) argues that students' sense of democratic concepts can be enhanced when students use language and writing to interact with their classmates. "Reading and writing are not merely communicative acts, but part of the habits, customs, and behaviors that shape social relations." (p.497). Nolan (2007) hypothesizes that students develop a sense of social realization through writing about topics that are important to them. Wells (1990) argues that reading texts and creating texts have social purposes. Through writing students develop meaning about the world around them and learn how others perceive their ideas and what is important to them. They have the opportunity to explore others' writing and learn to value differences. Students need to understand that writing is an action. Writing can have an effect on the world (Bomer, 2007).

Proponents of Critical Literacy argue that reading and writing should be used to foster social justice, it should force students to question society. Students need to be made aware of the power of language and text. By becoming involved in social justice issues students are exposed to multiple genres of writing. Bomer (2007) suggests a few when he states that students can create posters, pamphlets, flyers, websites, blogs, letters, and opinion papers, all with the intent of connecting to and creating relationships with others. Students can use these writing activities to raise awareness and lobby for change. Critical Literacy is used most often in Social Studies. However it does not have to be linked to any one particular discipline and can cross subject areas. Critical literacy can be used within multiple areas of study to provide students with the concept that social justice is part of every aspect of their lives (Behrman, 2006).

Research

Bushling & Slesinger (1999) conducted an observational study of Slesinger's middle school language arts class. Her goal was to increase democratic values through reading and writing. She used the background of the Titanic as a vehicle to explore social justice and inequality. After jump-starting student interest she asked students to journal about injustices they saw around them in the school, their neighborhood or community. These journal entries sparked classroom discussions and students began bringing in newspaper stories and became involved in small scale activism. Students expanded their writing to include letters, newspaper articles and brochures. They saw writing as a tool for making change. Bushling and Slesinger stress that the effectiveness of this project, as evidenced by student motivation and production, lay in building a strong community in the classroom, supporting student interest, and giving students a real audience to write for.

Effects of Different Genres

Chapter three has shown that writing can increase learning, critical thinking and democratic concepts for students. However there are many types of genres available for use in the classroom. Writing genres are defined as categories of works that share common characteristics such as form, purpose and style. Examples of genres can include but are not limited to: poems, abstracts, essays, laboratory reports, narratives, memos, letters, and expository pieces. This section will explore different genres and the different benefits they have for learning.

Through all of the studies of writing, it is obvious that different types of writing elicit different kinds of learning. When students are asked to manipulate or elaborate on

an idea or concept it improves subsequent recall (Langer & Applebee, 1987) In addition

Langer and Applebee were able to find a correlation between the kinds of writing done

and what is learned. Analytical writing that demands more thought and effort from

students leads to deeper understanding and longer retention of small amounts of

information. Langer and Applebee assert that this kind of writing requires more in-depth

reasoning because students are asked to rethink and transform their knowledge.

Newell and Winograd conducted a similar study in 1995 across two high school

social studies classes with the same teacher. One class was considered a general level

class while the other was considered academic. The study looked at several aspects of

writing in the classroom but the one aspect of the study most relevant to the current topic

compared analytic writing to summary writing. Newell and Winograd conclude that in

both classes analytic writing led students to have higher scores on concept application

while study questions led to better general recall of information. Newell and Winograd

state that while the correlation was clear, more research is needed into how different uses

of writing effect learning.

Another example of different writing doing different work was highlighted in a

study by Cantrell, Fusaro, and Daugherty (2000) with 89 middle school students. They

examined two types of journal use: summary journal writing and K-W-L journal writing

(these methods will be explained later in this chapter) within the framework of a social

studies class.   Their study concludes that K-W-L writing increases knowledge of content

material with students. Cantrell et al. hypothesized that the K-W-L format was more

effective as students were involved in the writing before and after class lessons and

reading. Students using the summary model only responded after.

Writing Across Content Areas

This section will outline the importance of using writing within content areas and highlight various types of activities that teachers use in their classrooms. By using writing across content areas it benefits students by exposing them to different genres in settings that are more likely to give credibility to authentic purpose. This section will outline the challenge some teachers see in using writing within their content areas and highlight the variety of writing that can be used in the classroom.

Ntenza (2006) did a study in South Africa looking at six junior high schools and the inclusion of writing in the math classroom. Ntenza found that despite the recommendations of the schools and boards of education, few students did any writing in math. Ntenza concludes that many math teachers fail to introduce writing into their curricula, as they do not see a connection between math and writing. Ntenza argues that math teachers feel that students will not learn basic concepts and they consider testing as the primary method of determining student success. Ntenza recommends that professional development is needed to give teachers the skills to successfully implement writing into their classrooms.

Peterson (2007) believes that content area classes are ideal places for helping students develop as writers. Writing across content areas can motivate students, emphasize the importance of communicating effectively in all subject areas and encourage students to make connections and process content at a deeper level. Newell (2006) argues that the broader the variety of writing processes students are involved in, the greater their understanding of connections and topics.

Langer and Applebee (1985) emphasize that writing across subject areas is essential. They believe writing has a place in all content areas and that it can be useful in three ways:

1. Students gain relevant knowledge and experience while preparing to complete new assignments

2. By writing students can consolidate what is known or what has been learned

3. By writing students can reform and stretch ideas and experiences

Hapgood & Palincsar (2007) argue that students use writing to ask and address questions, to reflect, to think and to learn to self-question (Gamill, 2006). When teachers encourage student writing within different subject areas they allow students to explore different genres of writing. This will build student awareness of the various types of writing and when it is appropriate to use each type.

Variety of Writing Activities

A vast assortment of writing activities is available to teachers. "Different tasks are likely to produce quite different effects on learning." (Applebee, 1984, p.586). Newell and Winograd (1995) stress that before beginning with writing tasks, teachers need to think about their educational aims and how writing can support these aims (Applebee, 1984 & Knipper & Duggan, 2006). The following section will give examples of writing activities that educators recommend for the classroom. This is not an exhaustive list but covers a variety of different strategies that teachers can implement in the classroom.

Note taking is one common form of writing that crosses subject areas. Langer and Applebee found that this task caused students to focus on remembering content. During note taking students did not reflect on or evaluate what was being said.

Study questions, common in textbooks, focus students on locating specific information. Answering study questions does not encourage students to reflect on what they have learned but can be useful for increasing recall (Langer & Applebee, 1987).

Essay writing requires students to evaluate or analyze content. Langer and Applebee state that this type of writing generates the greatest variety of reasoning operations (Langer & Applebee, 1987). When students participate in this kind of writing, they retain more information and demonstrate growth in critical thinking (Quitadamo & Kurtz, 2007).

Summary Journal Writing has students summarize or reflect on what they have read or learned during a unit. When students learn to summarize key ideas they increase their critical thinking skills (Knipper & Duggan, 2006).

KWL Journal Writing asks students to participate in writing before and after instruction. Students first write what they know, then formulate questions about what they want to know and finally, after the reading or lesson students evaluate what they have learned. Cantrell, Fusaro, & Dougherty found that the KWL model of journaling elicited greater understanding of Social Studies concepts than summary journal writing. Hanrahan (1999) suggests that journal writing in science class allowed students to describe their experiences and provided a way for students to build their own knowledge.

Free Writes or Quick Writes ask students to write whatever comes to mind about a certain subject or topic. Students are to keep writing during the entire time

allotted, which encourages them to generate ideas and express opinions about topics. This activity can consolidate background knowledge and focus student attention (Skeans, 2000).

Learning Logs can appear in a variety of forms. Knipper and Duggan (2006) outline one example as students answering teacher prompts before, during or after a lesson or reading assignment. Prompts can include questions such as: "What will I learn from this material? What have I learned from this material? What do I think about this material?" (Knipper & Duggan, 2006, p.465) Knipper and Duggan contend that when using this strategy, students will make predictions, activate prior knowledge and create a focus for the upcoming reading assignment and make connections between new material and what they already know. Students can follow-up with their learning-logs by elaborating on what they are learning as they read and pull out the most important information following the reading.

Notebooks can be used as an interactive tool for student learning.

> The interactive science notebook is a perfect opportunity for science educators to encapsulate and promote the most cutting-edge constructivist teaching strategies while simultaneously addressing standards, differentiation of instruction, literacy development, and maintenance of an organized notebook as laboratory and field scientists do.
>
> Chesbro, 2006, p.30

Chesbro shares one example of how interactive notebooks can be used with students. He asks his students to divide their notebooks into two columns. The right

side is used for input, notes and data. The left column is used by the student for output. This could include poems, word webs, visuals, questions, connections, illustrations or 3-2-1 reviews that ask students to describe three things they learned, two things they wonder about, and one symbol that highlights the main idea of the topic. Fried and Amit (2003) caution that teachers need to be careful and not exert too much control over student notebooks. If they are only for public use, students will not reflect on their learning or on questions concerning the content.

Science Writing Heuristic was developed by Carolyn Keys, Brian Hand, Vaughan Prain and Susan Collins in 1999. This method involves student collaboration and reasoning skills. Students need to: identify the questions and knowledge they have about a topic; outline what they do as they investigate the topic; record their observations, identify their ideas; highlight the evidence for their ideas and theories; compare their ideas to those of other students by sharing their writing; and finally to reflect on how their thoughts shifted or changed during the process (Hapgood & Palincsar, 2007).

Expressive Writing lets students explore their feelings, thoughts or opinions about topics. Often overlooked in content areas, expressive writing can help students develop thinking skills and become more aware of their connections in the world. Expressive writing can include memoirs, poems, stories, journals, and other types of writing that let the author control the mood and experience of the piece.

Project Based Learning can incorporate skills such as building effective communication in conjunction with content knowledge. Projects allow for diverse activities that can incorporate writing, such as power points, creating web sites and videos (Smikins, Cole, Tavalin, Means, 2002).

Mulitgenre Research Projects as conceived by Tom Romano in 1986, calls for students to incorporate a variety of genres surrounding one common topic or theme. Allen explains it as, "a collage of writing and artistic expression" (Allen, 2001. p.2). This expression allows students to study topics deeply and become experts. Multigenre projects may be challenging to implement, yet "students are more likely to become engaged and develop deeper understanding" (McMahon and Wells, 2007, p.117). The varied writing in multigenre projects allows students to use information in unique ways, different writing does "different work" (Romano, 2000, p. 22).

Summary

This chapter discussed the benefit of using writing to increase higher-level thinking skills. It states that writing can build learning, increase critical thinking and encourage the use of democratic concepts among students. Chapter three also examined the effects different genres have on learning and the role writing plays in different content areas. The following chapter will examine the strategies suggested in chapter two for diverse learners and discuss how these strategies can work to build higher-level thinking for all students.

Chapter 4

Using Writing in the Classroom

Overview

This paper has examined strategies to improve writing fluency for diverse learners as well as the role writing plays in fostering higher level thinking skills. Chapter four will create a framework for using the strategies successfully to promote higher-level thinking skills for all students. It will specifically focus on a combined strategies approach under the framework of the teacher, the assignment and the classroom. Presenting the various strategies within this framework is helpful in organizing the vast scope of strategies needed to meet the needs of diverse learners. This framework will guide the instructor through the many elements of writing instruction that work together to contribute to student learning. Chapter five will give practical suggestions for applying the framework to a variety of situations in the classroom.

The Role of the Teacher

The role of the teacher is a vital piece of the framework needed to successfully introduce writing strategies in the classroom. The attitude and expectations of the classroom teacher plays an important role in creating successful writing experiences and growth for all students. This section will look specifically at the importance of responsive teaching, of assisting students in setting clear, realistic goals, of teachers modeling their own writing practice, and of balancing skill instruction within the framework of authentic writing assignments. When teachers are able to incorporate these qualities into their practice, they foster optimal student learning.

Responsive Teaching

Based on the studies by Janisch and Johnson (2003) and Englert et al. (1995) it can be concluded that responsive teaching is a crucial element for increasing writing fluency and learning for all students. The success of Project Click and The Early Literacy Project support the idea that through writing, teachers can understand the needs of each individual student. Both studies highlight the importance of using one-on-one writing conferences to meet these needs. Teachers are able to keep abreast of content knowledge understanding as students demonstrate their knowledge through their writing.

Responsive teaching highlights the opportunity for teachers to gain insight into student learning and use writing as formative assessment. By attending to the written works of their students, teachers can gain understanding of the thought process and thinking skills students are using (Franklin & Thomson, 1994). Writing should not be seen only as a final assessment but as a dynamic diagnosis that allows the teacher to guide student learning. By observing students during the writing process and reading what students are writing, teachers can know each student as an individual and adjust to the student's needs accordingly.

Goal Setting

According to the studies of Olson and Land (2007) and Langer (2001), teacher's must have high expectations for all students and help students to set individual goals. The Pathway Project discussed in chapter two highlighted the importance of implementing a rigorous curriculum that gives the opportunity for setting high goals and conveys the belief of the teacher that all students can learn. Langer (2001) emphasizes the importance of students reflecting on and evaluating their own writing. Based on her 2001

study she concludes that students must be involved in assessing their learning and growth. Goal setting helps students to achieve a certain level of metacognitive awareness regarding their knowledge and how to expand it. Students that are involved in evaluating their own writing are not only gaining experience with higher-level thinking but are increasing their writing fluency.

Modeling

Englert et al. (1995) conclude from their study discussed in chapter two that modeling is an essential element for building writing fluency. Teacher modeling of their own writing behaviors and strategies is another important element for building writing skills.   Teachers need to immerse themselves into the writing process and demonstrate for their students what they are thinking as they go through the process. This involves more than laying out a sample for students to copy. Teachers who engage in writing with their students will not only model effective writing strategies, but will also model higher-level thinking as teachers analyze strategies and apply them to their writing in a way that is visible for students.

Balanced Skill Instruction

As outlined in the Pathway Project described in chapter two, Olson and Land (2007) state that skill instruction must be balanced between direct lessons and authentic writing assignments. Englert et. al (1995) also conclude that balanced strategy instruction contributes to increased writing skills. If students are only subjected to basic skill instruction through worksheets they will not move beyond basic thinking skills into higher-level thinking that involves problem solving, critical or creative thinking. There is

also the risk of losing motivation if students are relegated to drill and practice activities only (Ball, 2006 & Hill & Flynn, 2006).

Mini-lessons and one-on-one writing conferences allow the teacher to teach specific skills to specific students while encouraging them to use their new skills in their writing assignments. Educators must combine responsive teaching with high expectations to balance their basic skill instruction. Knowing the needs of their students and helping them to set goals should guide the teacher's use of skill instruction. If the teacher is truly able to see each student as an individual with different needs, little class time should be devoted to whole group direct instruction in writing strategies. Teachers should instead incorporate small group mini-lessons and one-on-one writing conferences to address the unique needs of each student.

The Role of the Assignment

The assignment is another key element to a successful framework for classroom writing instruction. Using authentic writing assignments creates beneficial writing experiences for all students and encourages higher-level thinking skills. This section will look specifically at the importance of purpose, audience, and flexibility in guiding writers towards higher-level thinking. Banger-Drowns et al. (2004) caution teachers that not all writing assignments are the same. They found that contextual factors played a significant role in the benefits of writing to learn; therefore strategies must be used appropriately to maximize the effects of writing.

Authentic Purpose

As discussed in chapter two, the study by Englert et al. (1995) concludes that educators will see greater success in student writing when writing connects to the

curriculum and students lives. Educators need to be aware that having authentic purpose woven into writing assignments motivates writers to create meaningful text. Educators also need to focus on the types of writing they are asking their students to be involved in and the learning goals they hope to reach.

Teachers can connect writing to the curriculum by having students write across content areas. Langer and Applebee (1987) reinforce this idea by stating that writing requires students to think deeply about content area knowledge, leading to higher-level thinking. Teachers have the opportunity to incorporate authentic purpose when writing is used across content areas. Writing across content areas gives educators the ability to expose students to multiple genres in authentic settings (Hapgood & Palinscar, 2007). They will better understand the purpose of each genre and can apply evaluation skills to determine which genre may be appropriate in different settings.

However, teachers need to be selective when considering the types of writing activities they choose for their students to be involved in. Not all writing activities will expand learning and thinking to the same degree. Langer and Applebee (1987) found that analytic writing leads to better recall than summary writing   As evidenced in the Quitadamo and Kurtz study, as well as in the Wallace et al. study, discussed in chapter three, writing does build critical thinking skills when used appropriately. Simply completing short answer questions from a textbook may not lead to students using critical thinking skills and can decrease motivation. Therefore, a variety of assignments must be incorporated to expand writing into the realms of higher-level by reaching across genres and subject areas.

Authentic Audience

In their 1995 study Englert et al. conclude that a key to the success of the Early Literacy Project was the sharing of student texts on a regular basis. Having an audience that goes beyond the teacher is a crucial way to motivate writers to create clear, well-developed products. Graham, Harris and Larsen (2001) also conclude that when students share their writing with their peers they demonstrate increased motivation. Creating text for different audiences encourages students to use higher-level thinking as they evaluate their audience and choose the most appropriate way to present information to their audience. If students are not asked to write for others, they miss out on this important opportunity to be involved in higher-level thinking.

Giving students a real audience to write for is an opportunity for teachers to incorporate democratic values into the classroom and lead students to think of themselves as part of a greater society (Bomer, 2007). Bushling and Slesinger observed a change in motivation and production as students used writing to inform and educate others. Writing to inform through letters, articles, brochures or speeches stretch the concept of audience and purpose. When involved in these types of activities students see writing as a way to accomplish a goal and participate in the world around them. They learn to evaluate what is important and to analyze possible solutions to problems they see around them. Students also apply writing strategies they have learned to inform and motivate others.

Flexibility

A final element of the writing assignment necessary to build student learning is incorporating flexibility into classroom lessons. Silver and Theodore (1993) and Lam and Pennington (1995) each conclude that allowing students to use technology increases

writing quality. Troia (2006) also advises using computers with students who have learning disabilities. Students find revision less stressful and do not fear the conventions of writing. Students' thinking skills and content understanding will be more visible to the teacher if students are not overly concerned with the mechanics of writing.

Another aspect of flexibility should be allowing for student choice within writing assignments. As discussed in chapter two, Bushling and Slesinger (1999) conclude that student motivation increases when their interests and ideas are respected and included in the writing process. Giving students choices fosters higher-level thinking as students evaluate alternatives like the best genre or means for their purpose. Nolen argues that students will also be more engaged when writing topics involve choice; they can connect to their experiences and to what is meaningful to them (Nolen, 2007). Students will be more willing to become involved in critical literacy activities if the topics are relevant to their lives.

Assignments should also be flexible in that they meet the needs of each student. Allowing a variety of ways for students to express themselves, incorporate technology, or write for unique audiences, increases student motivation. According to Applebee (1984) when students are more engaged in the writing process they are involved in thinking, reflecting, and organizing, each a significant goal of instruction and contributor to student learning.

The Role of the Classroom

The final element of the writing framework that cannot be ignored is the structure and attitude in the classroom environment. Establishing a community of learners was discussed as an important way to increase writing fluency for diverse learners. This

section will look specifically at student collaboration and classroom community in supporting the use of higher-level thinking.

Student Collaboration

According to the studies of Langer (2001), Olson and Land (2007) and Englert et. al (1995) student collaboration is an important element in creating writing success for all students. They conclude that students should share text often, looking for feedback, evaluating the feedback, and selecting which recommendations to apply to their writing. Collaboration lets students discuss their ideas and formalize their thinking before and during the writing process. Langer and Applebee (1987) stress the importance of allowing students to share and discuss ideas as part of the writing process, clarifying student language and thoughts. Ball (1995) and Gamill (2006) both note the benefits of using collaboration to increase student motivation.

Based on their study discussed in chapter three, Quitadamo and Kurtz (2007) found that essay writing leads to increased critical thinking skills and that these skills improved as students discussed ideas and worked together to create essays. Students were expected to share what they thought was important and to defend their ideas. Graham and Harris (2005) find that students who discuss ideas with their peers are able to apply new strategies to their writing more successfully. By encouraging students to interact, share and discuss, teachers promote higher-level thinking. This evidence suggests that writing activities should be social activities with built in opportunities for sharing ideas and strategies with peers and teachers.

Classroom Community

Bushling and Slesinger (1999) conclude in their observational study that a community evolves when individual interests are fostered and respected. Collaboration is only effective if students feel they are part of a respectful community of learners. Creating such a community of learners requires the opportunity to share and reflect, allowing different view points to be heard and respected. Peers can be involved in the social facets of writing by giving and getting feedback. This leads students to higher-level thinking as they analyze and evaluate writing strengths and points of view within their peer community. Berhman (2006) suggests that experiencing a classroom community also contributes to awareness of democratic concepts. Students listen to each other's ideas and share their own beliefs and values.

Limitations

This paper has proposed that with appropriate adaptations writing can be used to increase higher level thinking skills for all students. However, applying the adaptations can prove challenging. Four limitations must be surmounted: strategies must be combined to promote optimal learning, teacher experience with implementing strategies, the struggle to cover curriculum in the allotted time, and the unproven learning contributions of unique genres.

The successful projects discussed in this paper, such as the Pathway Project, Project CLICK, and The Early Literacy Project, all relied on a combined strategy approach to improving writing fluency for all learners. No one magic strategy is recommended as a panacea. This implies that in order to increase writing fluency and

higher-level thinking through writing, a major shift of classroom structure and practice is needed.

A second limitation when using writing to increase higher-level thinking is the experience of the classroom teacher. As was noted in the Early Literacy Project, teachers who had experience with the program reported greater success than teachers who were new to the project (Englert et al, 1995). Organizing a classroom that allows a teacher to manage one-on-one writing conferences while other students stay engaged can prove challenging even for veteran teachers. New teachers may also struggle to diagnose student needs in order to adequately plan appropriate mini-lessons.

A third limitation lies with the challenge of devoting enough time to the writing process. Teachers feel challenged to cover the entire curriculum and to prepare students for standardized tests. Higher-level thinking is rarely assessed by standardized tests, therefore teachers may feel it is more important to cover information quickly and move onto the next topic without going into deeper thinking processes.

A final limitation is the lack of research identifying the benefits of unique writing genres. Langer and Applebee (1985) contend that different genres contribute to learning in different ways and that the more an idea or concept is manipulated the deeper the understanding of the learner. However, there is limited evidence beyond summary writing, essay writing, and analytical writing. Teachers have a variety of genres to choose from and there is no clear guide as to the benefits of each, especially genres such as narrative, expressive and poetic.

Summary

This chapter proposed that by incorporating several appropriate teacher adaptations into the classroom through attention to the framework of the teacher role, writing assignments and the classroom environment, the writing process can contribute to higher level thinking skills. These adaptations in writing instruction allow students to build content knowledge, which leads to higher-level thinking and ultimately to an awareness of themselves as part of society.

This chapter also acknowledged limitations to fully comprehending the correlations among specific strategies and the exact benefits they have for students, as well as the limitations this structure has for new teachers concerned with covering curriculum and classroom management. A final limitation is the awareness that, as yet, there is an unclear picture of the unique contributions of particular genres.

The following chapter will suggest practical strategies for using writing in content areas to foster higher-level thinking for all students. These strategies are presented in the framework of the teacher, assignment and classroom to stress the importance of addressing all of these areas when using writing in the classroom. Chapter Five will also address the limitations discussed in this chapter as well as recommendations for future research.

Chapter 5

Using Writing in the Classroom

Overview

In this paper I have examined the role of writing in promoting higher-level thinking skills for all students. I have specifically addressed using writing to increase content knowledge, promote critical thinking and democratic values for students who are challenged by poverty, cultural diversity, the English language or learning disabilities.

As noted in chapter four, specific adaptations for individual student needs will guide students toward higher-level thinking while increasing their writing fluency. Adaptations need to be made by teachers under the framework that includes the teacher's role, the assignments they use, and the classroom organization. In this chapter I will give practical suggestions that educators can implement in their classrooms when using writing as a way to promote higher-level thinking. These recommendations do not cover all possible implementation strategies but give examples that teachers can adapt to fit their situations across content areas.

In order to demonstrate how writing can be used on a daily basis two examples will be given that teachers can build into their daily classroom activities. These examples are relevant across subject areas. They will be followed by two projects that incorporate writing, but require more planning and class time. As stated previously in chapter four, one limitation of using writing is that the unique benefits of all types of writing has yet to be explored; therefore, a variety of strategies will be more effective in meeting different learning goals. Each of the following examples will specifically look at the framework

that was established in chapter four in regards to the contributions of the classroom

teacher, the writing assignment and the classroom structure.

Using Writing Daily

We have discovered that writing builds higher-level thinking skills and allows the

learner to formalize their thought process. For instructors to use this knowledge they must

build writing into their daily classroom activities. Two examples are outlined below of

writing activities that can be incorporated across grade levels and content areas. These

examples are described and the role of teacher, the role of the assignment and the role of

the classroom are outlined for each example.

Interactive Science Notebook

Chesbro referred to the first example, an interactive notebook, in 2006. He

recommends that students divide their notebook pages into two columns. One column

can be used as input: recording information, note taking, and data. The other column can

be used for student output (Chesbro, 2006). This column opens a vast array of

possibilities for the students, such as posing questions and creating charts, graphs, lists,

diagrams, poems, reflections, comparisons, analyses, evaluations or any other

representation the student can imagine.

Teacher

Within this assignment teachers have the opportunity to incorporate the strategies

of modeling and responsive teaching. Teachers must model examples of output, such as

poems and word webs, making sure their thought process is visible to the students. The

classroom teacher should talk through their thinking process, even changing their mind

and crossing things out. Once students are comfortable with the idea of output, teachers

need to be flexible enough to allow students to explore their own methods. Responsive teaching can be used as teachers read student work, evaluate student learning and assess what instruction needs to be incorporated into future lessons.

Assignment

The role of this assignment is to allow for flexibility and authentic purpose. Students can demonstrate their learning in a way that is meaningful to them. Students can also connect writing to content and connect what they have learned to their lives, thoughts and feelings. This assignment incorporates student choice and student evaluation of the best possible way to represent ideas.

Classroom

Structuring the class so students can discuss and share output forms should encourage collaboration. Collaboration can occur by setting aside 20 minutes a week for students to exchange their ideas. Students can be involved in analyzing what others have done and giving feedback. Students can also collaborate in small groups to create a representation of what they have learned to display on the classroom wall.

Journal Writing

The second example of a writing activity that can be used daily in the classroom is the use of a journal. Through journal writing students can summarize, question, analyze, predict or express feelings about the topic. The process of having students put their ideas on paper will help them formalize their thinking (Applebee, 1984).

Teacher

With in journal writing the teacher can incorporate responsive teaching, balanced skill instruction, and goal setting. Teachers can gain an understanding of student learning

and respond to student writing by providing feedback, organizing mini-lessons when needed or encouraging students to stretch their thinking. Teachers can use the information they obtain by observing students and reading student work to help students set high, yet realistic goals. These goals can be related to structure, organization, time management or content understanding.

Assignment

Journal writing fosters the opportunity for flexibility, authentic audience, and authentic purpose. Within this structure students can connect with information that is meaningful to them and be involved in different genres. As shown by the Langer and Applebee study, analytical writing leads to better recall; however choice should be incorporated into this activity to keep motivation in the process (Nolan, 2007). Teachers can make journal writing more public and incorporate authentic audience by having students choose one entry a week to publish on a class wall of what students have learned. Another option would be to have students evaluate their entries, choose their favorite and submit it for a class newsletter. Allowing an audience and purpose for student writing will increase motivation and production (Bushling & Slesinger, 1999).

Classroom

Collaboration and community can also be encouraged by having students meet to share journal entries. Students can reflect on what others have written and offer suggestions for expanding or publishing a journal entry. Students can present their ideas in an environment that is safe and respectful.

<center>**Project Based Writing**</center>

Project based writing activities give students the opportunity to explore different genres and purposes for writing. Using large-scale projects that allow for a variety of writing assignments will increase depth of topic understanding and motivate students through the use of unique and creative writing opportunities. Two example of project based writing are described below. These examples are described and the role of the teacher, the role of the assignment and the role of the classroom are highlighted to emphasize the importance of integrating multiple strategies within each assignment.

Second Grade Science Example

This example uses writing as a form of project based learning. I personally used this example when I was a second grade teacher. At the time it engaged the students in a way that was surprising to me. Looking back, I see that many of the writing strategies discussed in this paper were woven into the structure of this project. I now understand that these strategies contributed greatly to its success.

Although this example is for a grade two science class, it can be adapted for other grades and subjects. During this unit of study the core concepts we addressed were mammal and bird characteristics and classifying. The unit was centered around the topic of bats as a way to excite and draw the students into the curriculum.

At the beginning of the unit, the class discussed what they thought and felt when they heard the word "bat." Then I had the students write down what they knew about bats and what they wanted to learn about bats. I then explained that they were going to create a class power-point presentation to educate others about bats. As a class, they

brainstormed what they would have to find out to become bat experts and what their

power point should include. They came up with a list that included questions such as:

- What is a bat?

- What kinds of bats are there?

- What do bats eat?

- Where do bats live?

- Why are bats important?

- Can you have a bat as a pet?

I then divided the class into 6 groups and assigned them one of the questions to

investigate. During the course of the unit the class was given time to investigate their

question and discuss with other groups what information they found that would be useful

to them. Sheets of chart paper were posted around the room with the 6 questions we were

investigating, and every time useful information was found, it was added to the

appropriate chart paper.

After sufficient time for investigation I modeled how to choose what information

would go on the group power point slide and how to write a script to accompany their

slide. Once the groups had designed their slide and written their script they conducted a

mock presentation for the class and gave each other feedback. Groups who finished their

slide and script early were encouraged to create another writing assignment about bats.

Students jumped at the chance to write more about bats and created poems, persuasive

letters to convince people they should not be afraid of bats, stories about bats,

comparisons of fruit bats to insect eating bats, and even a news story about a bat who had

saved the city from mosquitoes. Students were encouraged to use their knowledge in a

different way; this reinforced and extended their thinking about the characteristics of bats and other animals.

The final element of this project was for the students to present their power point show to other grade levels and parents. This gave them an authentic audience and purpose. It also reinforced their idea of democratic concepts as they felt they had an important role in educating others about bats. A bulletin board was set up to display the other writing tasks they had accomplished. Students completed the unit of study by finishing their KWL charts, writing down what they had learned about bats and how their feelings had changed.

Teacher

The strategies I incorporated during this process were responsive teaching, modeling, and balanced skill instruction. I invested time with groups to discuss their progress and what challenges they were encountering. I modeled how to find information and how to include the most important information on their slide. I made decisions about instructional needs by attending to what students were writing. Occasionally, I noticed that all of the groups were struggling with some aspect of their writing and felt a whole group lesson was needed; other times small group or one-on-one lessons were appropriate. An important element for educators to remember is to let students show what they need through their writing and their thinking process.

Assignment

Authentic audience and purpose were important aspects of this project. From the beginning students knew that this assignment had value. They were eager to educate

others about bats and to show off what they had learned. They felt a responsibility to create a project they could be proud of.

Classroom

During this class project the room was often noisy and a bit chaotic. Collaboration and community were in full swing, although I can't say it was always peaceful community. On occasion, I had to step in and remind groups that every individual's thoughts should be respected and incorporated into the final project. Even my ELL students participated avidly by looking at pictures of fruit bats and insect bats and listing the differences in their physical characteristics. By the end they were able to articulate what bats contributed to the environment. Students shared ideas constantly and were excited when they discovered information that could help another group. Toward the end of the assignment groups worked together to evaluate the most important ideas to include on their slide.

At the time, the success of this project left me feeling overjoyed at the learning that had taken place, and probably a bit overconfident. I had stumbled into something that I had not fully understood. Based on the evidence from chapters two and three it was the combination of writing strategies employed, not just one brilliant teaching idea, that created the atmosphere for success with my second graders.

Fifth Grade Social Studies Example

The final example that this paper will discuss is the multi-genre research project I used with Jack's class. This idea, conceived by Tom Romano, has been incorporated by many other educators. As previously stated, this project was done with a diverse 5th grade Social Studies class, but the method can be altered to fit the needs of different

classes. Middle and high school science, math, or social studies teachers can team with an English or Language Arts teacher to create a project together. Englert et. al. (1995) note that students benefit from connecting subject areas. I was aware at this point that writing, when used properly, could give students the opportunity to practice higher-level thinking, yet I was naïve about the role the strategies play when they work in conjunction with each other.

The main topic of study for this unit was Native Americans. Key concepts included the vast differences among these groups, the resources available to them, the adaptations they made to survive in their environment, and finally the existence and lifestyle of Native Americans today.

At the beginning of the unit, students were asked to choose the Native American group they wished to study and their methods for demonstrating what they had learned. I provided activity choices, but students were also given the option of creating their own activity with my approval. The goal for students was to use at least three different genres to represent what they had learned. The unit culminated with a Native American open house that provided an audience and purpose for student writing.

I used A KWL lesson to get students thinking about what they knew and what they hoped to learn about Native Americans. Students worked in groups to write what they knew and wanted to know on chart paper. These were then posted around the room as visual representations of what they were exploring.

Once tribes had been chosen, students began a learning journal about their tribe. They used this journal to write down anything they thought might be important. One interesting method of gathering information was to write tribal counsels still in existence

and ask for information. Although not every student received a response, this gave their writing a purpose and reinforced democratic concepts as they saw the social nature and effectiveness of writing.

During the unit I modeled the different types of writing activities from which I was asking my students to choose. I tired to limit the genres to two new types of writing; the others were familiar to the students from previous writing experiences.

Writing activities included:

- How-to Paper; for a game, hunting, making their lodging, food

- Letter from a Native American giving advice to someone living in his or her region today

- Journal written by the student if they could magically spend one day with this tribe

- Poem about the lifestyle of the tribe or something important to them such as the buffalo

- Newspaper article about an event in the history of this tribe

- Fictional story about an event in the life of one of the tribal members

- Retelling of one of their folk tales

- Description of their clothing, housing, food with illustrations or model

- Comparison/Contrast paper of a Native American teenagers life to their own

- Informative paper on the state of the tribe today

Having students choose at least one of the fictional elements challenged them to analyze and imagine what the lifestyle was really like. Each of the genres required students to manipulate information in unique ways.

With this project it was essential that I read the student learning logs on a consistent basis. This helped me determine what information they had and what

information they might still need to find. Using this knowledge I helped them to create learning and time management goals. I also set up class time for students to meet in small groups and discuss what they were learning about their tribes and how they were going to show this information.

Before the culminating activity, the open house, students worked together to create a class poster of the most important elements of the Native American cultures they had learned about. This was displayed prominently in the classroom as a visual reminder to students that their writing was going to inform and educate others.

Teacher

This project allowed me to teach responsively, help students set clear and realistic goals, model writing strategies, and balance skill instruction within authentic writing assignments. Evaluating student understanding guided the use of whole-class instruction, mini-lessons and one-on-one teacher conferences. Reading student learning logs ensured that I knew what the students were absorbing and what they were missing. This gave students like Jack confidence that they had correct information when creating their final project. One-on-one conferences happened while the rest of the class was engaged in the writing process. To avoid interruptions while having one-on–one conferences, I made sure instructions were clear before students began their work time. I had the opportunity to model new writing styles and help students set goals. I expected students to use in their projects the writing skills we were discussing. Students reflected on what they were doing and evaluated their uses of writing.

Assignment

Authentic purpose, audience and flexibility were important aspects in this project. Students were writing for peers and younger students with the goal of educating and informing. Writing was tied to content instruction and the flexibility that students had in representing their information kept them motivated and engaged. Having the responsibility of informing others increased their awareness of democratic values. Students understood that writing can connect individuals, and the impact that our views and ideas can have on those around us.

Classroom

Again within the framework of this project, students were expected to share their ideas and engage with their peers. Students were encouraged to listen to and respect others ideas as well as to present their own. This was the first project in my class for these students, and by the end they were very comfortable and respectful when sharing ideas. They truly worked together to establish a community of learners.

<center>**Final Recommendations for School and Teachers**</center>

Staff development is a crucial component whether implementing writing in the classroom or any other school improvement effort. Teachers need to be aware of strategies that can help all students to use writing to increase higher-thinking skills. Schools need to promote writing and encourage connections across content areas while providing teachers the necessary tools to implement writing effectively.

Teachers may already be implementing many of these suggested strategies in their classrooms, but this paper should serve as a reminder as to why these strategies are important. It is vital that teachers believe all students can write and learn. It is important

for teachers to remember that the teacher, the assignment, and the classroom all play a role in the successful use of writing to build higher-level thinking. Teachers must: use student writing as a guide for instruction; assist students in setting high yet realistic goals; model their own writing practices; and balance skill instruction within authentic writing assignments. Writing assignment must have authentic audience and purpose and allow for flexibility and choice within assignments. Finally, the classroom must be a place where collaboration occurs regularly and the environment is supportive. Teachers should not fear the writing process. Teachers can learn how to express their ideas through writing along with the students. Teachers can model and show growth that will inspire their students to try new things. The attitude teachers exhibit toward writing and student ability is the ultimate model.

Recommendations for Future Research

Writing fluency is a critical skill that benefits students in school and beyond. However, beyond the structure and organization of writing, this paper has emphasized the benefits the process of writing has on higher-level thinking. It has commonly been believed that different writing has different effects on learning. Studies have compared analytical to summary writing, for example. However, little research has been done to study the effects on learning that other genres, such as expressive writing, have on learning. There is also need for a study on the implications of students using writing to inform or educate others and the contributions this makes to learning. As more teachers become comfortable using writing in their classrooms, there will be greater opportunity to explore these questions in authentic settings.

Appendix 1

Appendix 2

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