METACOGNITION IN ADULT BEGINNING READERS:

A PHENOMENOLOGICAL STUDY OF

NATIVE ENGLISH SPEAKERS LEARNING TO READ

BY

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Abstract

Metacognition provides insights into the internal information processing of an individual. Studies around metacognition and reading have demonstrated that metacognitive thinking during reading reveals an individual's knowledge of the reading process. In examining adult literacy students, metacognitive descriptions can provide insight into limitations and errors in the learner's understanding of the steps to reading comprehension. Using a phenomenological approach, the researcher interviewed thirty native English speaking low-literacy adult learners to uncover the metacognitive processes of their thinking during reading. This revealed gaps indicative of the learners' limited performance: specifically, there is a lack of focus that the intent of reading is to garner meaning from the text. The researcher also examined the metacognitive understanding of the same learners during tasks in which they perceive themselves to have a specific strength or expertise to determine if any of the problem-solving strategies present in these tasks could be leveraged in assisting the reading process. While there were parallel processes, there is limited direct applicability for use in the developmental process of learning to read.

Table of Contents

List of Tables

List of Figures

CHAPTER 1. INTRODUCTION

Introduction to the Problem

Low-literacy statistics in the United States

Low-literacy is a significant issue in the United States. According to the National Center for Education Statistics, between 12% and 14% of the US adult population demonstrated skills in the lowest literacy level ("below basic") on a four level scale on the two reading-related subsections used on the 2003 National Assessment of Adult Literacy (NAAL). Fourteen percent scored at the lowest level on the prose section and 12% on the document section (Kutner, Greenberg, & Baer, 2005, p. 3). At this level, interviewees could not follow simple written directions or locate information in basic prose text. In 1992, the same project, known then as the National Adult Literacy Survey (NALS), showed the lowest level of performance at 14% for both prose and document literacy (Kaestle, Campbell, Finn, Johnson, & Mikulecky, 2001; NCES, 2005). Both the NALS and the NAAL studies were large scale, government-funded studies designed to measured people's reading abilities. They were asked to read and answer questions about prose sections, find information in documents, and perform some quantitative mathematical calculations.

A closer examination of the NALS/NAAL statistics of those scoring in the lowest literacy category reveals that 9-12% of these people grew up in homes where English was the only language spoken in the home. Additionally, many of these lowest literacy adults are high school or better graduates from the American school system; yet they are only reading at the below basic level on a four (NAAL) or five (NALS) level scale assessing reading. These figures are identified in Table 1.

Table 1

Language spoken before starting school and educational attainment for adults scoring in the lowest literacy category on the NALS/NAAL for reading subtests (NCES, 2005)

Language/Schooling	Prose		Document	
	% 1992	% 2003	% 1992	% 2003
Language spoken before starting school				
English only	11	9	12	9
English and Spanish	19	14	18	12
English and other language	15	7	19	10
Spanish	52	61	41	49
Other language	32	26	29	20
Highest educational level				
Still in high school	11	14	10	13
Less than/some high school	45	50	44	45
GED/high school equivalency	9	10	9	13
High school graduate	11	13	12	13
Vocational/trade/business school	9	10	8	9
Some college	4	5	4	5
Associate/2-year degree	2	4	3	3
College graduate	2	3	2	2
Graduate studies/degree	1	1	1	1

Note: Percentages may not sum to 100% because of rounding
For the NAAL and NALS studies, adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from these tables (NCES, 2005).

Adapted from *Data Tables: A First Look at the Literacy of America's Adults.* National Center for Educational Statistics. (2005). Retrieved 12/15/2005 from http://nces.ed.gov/naal/Excel/2006470_DataTable.xls

Educating adult low-literacy learners

Regardless of the demographics, this population has very limited reading skills. Many of them are the learners enrolled in adult basic education classes. In the world of adult education programs, there are several major dividing lines. There are two broad categories based on learning level: those wishing to complete a high school diploma (GED [General Educational Development] students), and those needing to improve basic skills (ABE [Adult Basic

Education] students). Secondly, this same population is divided into categories around language abilities. There are native speakers of English (NSE) who grew up speaking English in their homes, and those who are learning English, known as ESL (English as a Second Language) or ELL (English Language Learner) students. The ESL population is further divided based on speaking abilities, educational background, and literacy skills. Additionally, students may be grouped based on whether the first language has a Roman alphabet like English or one that is totally different, such as Chinese.

Native English-speaking adults attending adult basic education classes have unique needs because they generally have not succeeded in the traditional American classroom. This may be because of a learning disability, or the need to leave school for financial reasons, pregnancy, work, military duty, family or personal issues, as well as academic and behavioral causes (Kaestle, Campbell, Finn, & Johnson, 2001). For whatever reason, many of the individuals studying in ABE classrooms begin to learn to read, but often plateau at the second or third grade reading level (McKinney, 2001). According to Abadizi (1995):

> When adult illiterates succeed in completing literacy classes, they often end up with skills of limited utility, and lengthy or complex texts may be beyond the limits of their patience. They often read slowly, sound out letters, and may make many mistakes. To read materials other than textbooks they need post-literacy training. Word segmentation and instant recognition, the hallmarks of fluent reading, are not skills often mastered in literacy or even in post literacy courses. At the early stages, the difficulty can be attributed to lack of practice, but apparently it persists even after 2-3 years of practice. (p. 4)

Many adults with limited reading skills cannot differentiate sounds in words, divide words into syllables, or remember sound-symbol associations. Most have difficulty comprehending the words that they have decoded and making sense of the information they have

read (Alamprese, 2001; Bell & Perfetti, 1994; Campbell & Malicky, 2002; Davidson & Strucker, 2002; McKinney, 2001; Russell, 1999; Stanfel, 1996; Thompkins & Binder, 2003).

This paper focuses on the native speakers of English enrolled in an adult basic education program (NSE ABE) realizing that it is only a small percentage of the adult low-literacy population in the United States. It will examine those who seem to be "stuck" as this early reading level, looking for some potential explanations. It will consider questions to explore the metacognitive processes around reading in beginning adult readers, exploring topics including what occurs in the mind of a beginning reader as they are reading, and how they determine what to do to decode words and make sense of the information set before them.

Limited reading skills, yet successfully functioning in society

NAAL defines literacy as "using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential" (Kutner et al., 2005, p. 2). UNESCO (United Nations Educational, Scientific and Cultural Organization) considers a person to be functionally literate when:

> A person … can engage in all those activities in which literacy is required for effective function of his or her group and community and also for enabling him or her to continue to use reading, writing and calculation for his or her own and the community's development. (UNESCO, 2002, para. 1)

Despite their reading level, most low literacy learners are able to function successfully in society. Even though they need help with basic tasks requiring reading, such as filling out forms, they are often able to hide this disability from the world around them. They take buses, hold jobs, and have families. Most are involved in broad social networks and lead full active lives. In general, despite their lack of reading, many tend to excel in other areas (Merrifield, Bingman,

Hemphill, & Bennett deMarrais, 1997). They work within their social network, exchanging tasks and helping one another.

How do functionally illiterate people manage in an information-intense society without the benefit of reading? They must compensate when they can, and ask for help when they need it. Many of these adults have devised complex coping mechanisms to survive. Low-literacy adults face numerous challenges, but their abilities allow them to operate successfully despite their limitations. They are restricted by what they are able to do without reading, particularly in the types of jobs they are eligible for.

This research examines the thinking involved in the reading process of these low literacy adults. It looks at the metacognitive processes and understanding about reading in the minds of a variety of native-English speaking adults who are learning to read in Adult Basic Education classes. It also examines some of the metacognitive processes used by these individuals during the tasks in which they consider themselves to be highly successful. It was anticipated that there might be opportunities to leverage some of the thinking used in areas of expertise or strength in reading.

<center>Background of the Study</center>

According to the National Assessment of Adult Literacy, nearly 1 in 7 adults in the United States is considered functionally illiterate (Kutner et al., 2005). Coupled with the data from the US Bureau of Census data available in May 2006 (*US Census Bureau Population and Household Economics Topics*, 2006), that means that approximately 42.6 million Americans are considered at the lowest level of literacy. What does this group look like?

In a comparison of the adults in the lowest literacy level and the national population, there are less whites, more blacks and Hispanics, significantly more people over 65 years old and non-high school dropouts. The variance is depicted in Table 2.

There is also a significantly higher proportion of the low-literate population in prisons. It is estimated that there were 1,380,000 incarcerated adults in 2003. According to research from 1986 widely cited on the internet, one-half of all adults in federal and state correctional facilities cannot read or write at all (Bellorado, 1986). While this statistic is extensively quoted on literacy websites, it is not substantiated in later research. In 1992, about 1: 3 (31%) prison inmates performed at Level 1 (NIFL, 2005) on the prose scale of the National Adult Literacy Survey, compared with the general population of 1:7. Seven in ten inmates were assessed at the lowest two levels on the survey. On the prose section, 68% of the inmates scored at the lowest levels. On the document section, 71% were at the lowest levels and on the quantitative section, 72% were at this bottom tier (Haigler, Harlow, O'Connor, & Campbell, 1994). This is considerably higher than the general population. By comparison, in the general population, these two lowest levels comprise a little under 5 in 10 with prose at 48%, document literacy at 51%, and quantitative assessment at 47%. At the time of publication, the prison statistics had not been released for the 2003 NAAL, although the data on those in prison is included in the general pool of the 14% of the overall population scoring at the lowest level of literacy of the data that has been released. Since the lowest literacy level percentage for 2003 is identical to the 1992 results, it is expected that the prison statistics will be similar for the 2003 analysis of the incarcerated population, reflective of a significantly higher population of lowest literacy adults in prison when compared with the general population.

Table 2

Comparison of Below Basic Literacy Population to the National Population on the 2003 NAAL

Comparison Area	% Below Basic Literacy	Total % NAAL Survey	Significant Difference
Race/ethnicity			
White	37	70	*
Black	20	12	*
Hispanic	39	12	*
Asian/Pacific Islander	4	4	
Gender			
Male	46	49	
Female	54	51	
Age			
16-18	5	6	
19-24	9	11	
25-39	25	28	
40-49	16	20	*
50-64	20	21	
65+	26	15	*
Language spoken before starting school			
English only	52	81	*
English and Spanish	2	2	
English and other language	2	4	*
Spanish	35	8	*
Other language	9	5	*
Educational Attainment			
Less than/some high school	55	15	*
GED/high school equivalency	4	5	
High school graduate	23	26	
Vocational/trade/business school	4	6	*
Some college	4	11	*
Associate's/2 year degree	3	12	*
College graduate	2	12	*
Graduate studies/degree	1	11	*
Disability status			
Vision problem only	7	5	*
Hearing problem only	4	5	
Learning disability only	4	3	
Other disability only	10	8	*
Multiple disabilities	21	9	*
No disabilities	54	70	*

Note: Table 2 is adapted from *Data Tables: A First Look at the Literacy of America's Adults.* National Center for Educational Statistics. (2005). Retrieved 12/15/2005 from http://nces.ed.gov/naal/Excel/2006470_DataTable.xls

To provide meaning to the abilities at these levels, the lower two level skill sets (Below Basic and Basic) are described in Figure 1, which is an excerpt from the initial reporting from the National Assessment of Adult Literacy (Kutner et al., 2005). Adults functioning at the Below Basic level cannot locate easily identifiable information in documents or follow written directions.

A First Look at the Literacy of America's Adults in the 21st Century

Table 1.   Overview of the literacy levels

Level and definition	Key abilities associated with level	Sample tasks typical of level
Below Basic indicates no more than the most simple and concrete literacy skills. Score ranges for *Below Basic*: Prose: 0–209 Document: 0–204 Quantitative: 0–234	Adults at the *Below Basic* level range from being nonliterate in English to having the abilities listed below: ■ locating easily identifiable information in short, commonplace **prose** texts ■ locating easily identifiable information and following written instructions in simple **documents** (e.g., charts or forms) ■ locating numbers and using them to perform simple **quantitative** operations (primarily addition) when the mathematical information is very concrete and familiar	■ searching a short, simple text to find out what a patient is allowed to drink before a medical test ■ signing a form ■ adding the amounts on a bank deposit slip
Basic indicates skills necessary to perform simple and everyday literacy activities. Score ranges for *Basic*: Prose: 210–264 Document: 205–249 Quantitative: 235–289	■ reading and understanding information in short, commonplace **prose** texts ■ reading and understanding information in simple **documents** ■ locating easily identifiable **quantitative** information and using it to solve simple, one-step problems when the arithmetic operation is specified or easily inferred	■ finding in a pamphlet for prospective jurors an explanation of how people were selected for the jury pool ■ using a television guide to find out what programs are on at a specific time ■ comparing the ticket prices for two events

Figure 1 Definitions, abilities and tasks of the lowest two skill levels on the 2003 NAAL

Note: Reproduced from National Assessment of Adult Literacy (NAAL): A First Look at the Literacy of America's Adults in the 21st Century *(No. NCES 2006-470). Jessup, MD: National Center for Educational Statistics*

With this high level of low literacy in the United States, there is a critical need for adult literacy programs to provide skill development for individuals inside and outside prison walls in

the United States. With the large immigrant population in the US, many literacy programs target ESL learners, but very few target NSE low-literacy adults. For native English-speaking adults, there are many personal and social barriers that must be overcome in order to take the initial step to enter a literacy classroom. Following the admission of the need for help, there are often waiting lists for entry into a reading program. Classes may not be available during NSE adults' non-working hours. Once in a classroom (or beginning to work individually with a volunteer tutor) there are many complex steps to be mastered before any individual can begin to decode words and understand what they mean. Additionally, for most, there are past issues of shame and failure encountered in learning to read as a child. Yet once past the initial hurdle of deciding to learn to read, in most cases they come, zealous to learn, no matter what it takes to succeed.

In consideration of this background, it was anticipated that an exploration of these learners' thinking during the initial learning to read process could serve to provide insight into how they construct the reading process and pinpoint errors for correction. Many of these readers have developed highly sophisticated coping mechanisms to function in society. It was proposed that understanding the thinking behind their coping strategies, particularly in areas they considered themselves highly successful would reveal insights into concepts and tactics that could assist in the learning process of reading.

Statement of the Problem

Many NSE (Native Speakers of English) adult beginning readers plateau at lower reading levels, never gaining the fluency of skilled readers. Even if they continue in a literacy program, it appears that something blocks them from additional progress (Viise & Austin, 2005).

Researchers are unsure why this occurs. It is possible that there is a learning disability or some other mental block. In an online discussion with adult literacy professionals regarding this subject, several hypotheses were posited: limited vocabulary, poor phonemic awareness, lack of sight words, lack of time spent in practicing or perhaps the ongoing impact of the Matthew effect (defined in the literature review) (*Adult literacy education: Research and practice*, 2005). Despite their limitations in reading, these adults are often able to successfully manage their lives in other areas. What allows them to be successful in everyday activities, but limits them from grasping the skills necessary to read?

Purpose of the Study

The purpose of this study was to explore the metacognitive processes of NSE adult beginning readers to acquire insights as to what causes many of them to plateau at the second and third grade reading level (McKinney, 2001). Furthermore, the researcher sought to explore the metacognitive processes of the participants in areas the learners perceived themselves as highly successful. The areas of self-defined strength/expertise were expected to be quite varied, and could include things like artistic talent, cooking, woodworking, childcare or small engine repair. Is there transferability between the two? Bransford, Brown, and Cocking (2000) believe that metacognitive skills have transferability between domains. Writers in the secondary and higher education arena know that metacognitive skills have transferability in the content areas regarding study skills and note taking (Peirce, 2003). It was hypothesized that NSE adults may have metacognitive processing abilities in areas of strength/expertise that could be leveraged in the instruction of basic reading skills.

Using a phenomenological approach, the researcher sought to uncover common threads in these learners' understanding of the reading process and coping mechanisms. The phenomenological process seeks to reveal the perspective of an issue from the participants' viewpoint (Wimpenny & Gass, 2000). The goal of this study was to expose metacognitive issues around the reading process and contrast this perspective with areas of strength/expertise using the words and insights of the participants.

<div align="center">Research Questions</div>

To understand the metacognitive processes of these learners, the researcher must ask questions about the subjects' understanding of concepts and skills utilized. The interview questions listed Appendix A and ensuing analysis attempted to uncover the following information within the limited sample population of NSE beginning reader adults.

1. How do NSE adult beginning readers define the reading process?

2. What metacognitive processes do NSE adult beginning readers use during decoding?

3. What are the metacognitive processes used by NSE adult beginning readers during the meaning-making of reading text?

4. What are some of the metacognitive processes used by NSE adult beginning readers during complex, non-reading tasks in which the subject perceives him or herself to have strength, talent or expertise?

5. Are there any relationships between the metacognitive processes of the self-defined expert/strength area and the limited ones of reading?

Theoretical/Conceptual Framework

This study used a phenomenological approach, interviewing beginning adult readers in an attempt to understand the reading process as the learners understand it, as well as to explore some of the metacognition behind the coping mechanisms and expert/strength skills they use to function in society. The phenomenological approach is particularly well suited to this population because it involves speaking without any reading, allowing the subjects to clarify and respond without limitations. Students were asked to explain their metacognitive thoughts around the reading process and a non-reading, functional task in which they perceived themselves to have strength, talent or expertise. As with any self-reporting study, the researcher needed to be cautious, realizing that people may over- or under-report their capabilities, and what they say may not be what they actually do.

Significance of the Study

This study can help Adult Basic Education teachers understand the thinking of some students who appear to be stuck at the beginning levels of the reading process. It may also help some beginning adult readers unlock the problem keeping them from gaining fluency in reading. It was proposed that the study might provide insight to researchers regarding NSE adult beginning readers' ways of knowing.

Definition of Terms

The following terms are used throughout this paper. Many are based on the Canadian work of Poissant (1994) who compartmentalized the differences between the beginning levels of literacy. These terms fall on a continuum:

Completely   Functionally   Low-literate
Illiterate   Illiterate
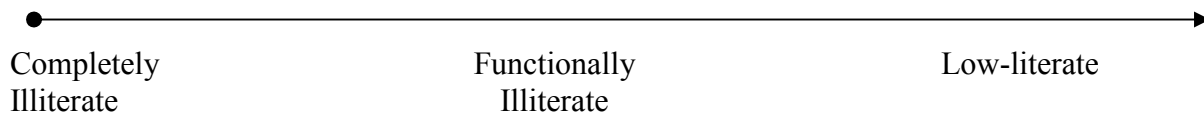
Figure 2. Literacy continuum.

The 1992 National Adult Literacy Survey (NALS) groups all of these lower level adult readers into one group, labeling them Level 1 on a five level scale; likewise the 2003 National Assessment of Adult Literacy homogenizes this group and labels the group Below Basic. This study explores this group in depth, so some distinction must be made to identify the subsets within it, hence these terms are defined. They are listed in alphabetical order in Table 3.

Table 3
Definitions of Terms

Term	Definition
Beginning readers	Those readers who have not attained a reading level at a grade equivalent beyond second grade.
Completely illiterate	A person who can neither read nor write or can only recognize his or her name.
Expertise	"Having, involving, or displaying special skill or knowledge derived from training or experience" (Miriam-Webster, 2006); one who performs skillfully; used in the more colloquial sense than the specificity of educational psychology literature
Functionally illiterate	A person who is a non-reader yet still manages to navigate and function in a community. Some members in this category can recognize letters but are unable to assemble them to form words.
Functionally literate	A person who "can engage in all those activities in which literacy is required for effective function of his or her group and community and also for enabling him or her to continue to use reading, writing and calculation for his or her own and the community's development" (UNESCO, 2002, para. 1)
Low-literate	A person who can neither read nor write nor understand a short, simple presentation of facts that relate to every day life in his/her native language; or one who has attended school for five years or less. This is a global category that includes the completely and functionally illiterate individuals.
Metacognition	The thinking behind the thinking; stepping back and analyzing the processes used and understood concepts about something.
Native-English-Speakers/ Native Speakers of English (NSE)	Adults who have grown up with English as their primary (or only) language.
Orthographic Awareness	The ability to visually recognize spelling patterns and typical conventions of printed English.
Phonemic Awareness	The ability to perceive and differentiate the individual sound components in words
Strength	Special ability or talent of an individual

Assumptions and Limitations

Assumptions

During this study, the researcher assumed that metacognitive understanding reveals the thinking of the students. It was also assumed that interviewing thirty students would reveal some common themes about the metacognitive processes of the participants. In addition, it was assumed that the students would be willing and able to discuss their metacognitive processes, though there existed a possibility that these students would not understand what information was being sought. Students did not need to understand the term metacognition, but rather the concept of what metacognitive information is. Metacognitive processes are complex and subconscious. It was also assumed that questioning would allow the researcher to obtain sufficient information to provide insight into the metacognitive thinking of the subjects and adequate data to provide analysis of the topic.

Limitations

There are several limitations to this study. The limited sample size of this research is a very small population from which to generalize information, and does not represent the thinking of the entire adult NSE beginning reader population. Low-literacy adults have limited cognitive resources available during the reading process (Garner, 1988) and may not be able to identify their thinking during the reading process. Even experts have a difficult time explaining their processes (Schraw, 1998) and students in this group often have limited language abilities; therefore, students may not understand or be able to verbalize enough about the processes to provide useful information. The researcher provided a variety of examples to assist the subject with understanding what was being sought and was prepared to demonstrate with a think aloud

process of a specific task the subject might observe as described in the measures section. Finally, metacognition is a subconscious process, generally "developed without any conscious reflection and is often difficult to report to others" and "may not be statable [*sic*] in many learning situations" (Schraw, 1998, p. 91). Therefore, what is actually occurring may not be able to be uncovered. It was anticipated that as the subject discussed the area of strength, talent or expertise, more understanding of the concept of metacognition would be gained, and the student would be better able to elaborate on the metacognitive reading processes at that time.

This study was based on only the information provided by the students, which may only be an approximation of what actually occurs in their minds during reading and their expert/area of strength task. It was assumed that it would be an accurate representation in metacognitive studies.

<div align="center">Summary</div>

This chapter presented an overview of the research, which was designed to explore the metacognitive thinking of native-English-speaking adults learning to read. The group that was studied represented a subset of the one in seven Americans rated in the lowest level of literacy in the 2003 National Adult Assessment of Literacy. The research was conducted using a phenomenological methodology, addressing the metacognitive processes of reading and an area the subject would consider himself/herself to possess some degree of strength, talent or expertise.

The next chapter overviews the current research data on the developmental process of reading in adults and children. It also includes a brief overview of metacognition then connects metacognition and reading. The final section explores strength-based theories, expertise and transfer of learning theory.

CHAPTER 2. LITERATURE REVIEW

The Development of Reading

Reading is a complex, developmental process. When one considers all of the components

involved in the reading process, it is astounding that anyone ever masters it. Most of the research

on the development of reading has been undertaken with children. An adult learning to read must

master the same tasks as children learning to read, but the adult has more resources gained

through life experiences at his/her disposal. Many processes are parallel, but some are unique for

the adult learner. This overview will consider the development of reading in general, looking at

what occurs in both children and in adults.

Underwood (1997) describes the processes necessary for reading:

[Those individuals] just beginning to read face a daunting task. They must learn to
identify several thousand printed words in context; in root and inflected forms, and they
must interpret the meanings of those words in their contexts in order to get the message
of the text. To succeed, they must master quite a lot of technical knowledge about how
print works. In no particular order, they must master, for example, the shapes of letters,
the sounds in spoken words, letters and sounds in patterns, words within grammatical
structures, the left-right movement of the eyes across lines of text, the meaning of
punctuation, and how meaning accrues across syntactic structures to form a message.
There are multiple opportunities for beginning readers to make mistakes when they set
out to read a page. (p 77)

While reading is a learned process, it is also a developmental one. Individuals must have

story and print awareness prior to the onset of reading. Beginning readers must start by

identifying letters and sounds, blend them into words, make meaning out of them, and progress

through a continually complex process to arrive at fluency. Figure 3 identifies the basic

progression of individuals learning to read.

Pre-Reading / Developmental Awareness

Stage One: Story Awareness
Child/learner loves to hear stories read in books, told orally, or watched on television/video/DVD

Stage Two: Phonemic Awareness
Child/learner begins to become aware of sounds in words; plays with rhymes

Stage Three: Print Awareness
Child/learner becomes aware of print; wants to write name, may write "letters"

Stage Four: Letter-Sound Connection
Child/learner learns name and sound of letters, key word for each sound, begins to write letters

Early Reading

Stage Five: Phonics
- Child/learner begins to string together letters to form words and pseudo-words
- Child/learner can substitute initial and final consonants
- Child/learner can name letter for sound and sound for letter
- Child/learner can write letter(s) for sound
- Child/learner begins to create sentences with meaning

Continuing Development

Stage Six: Comprehension
- Child/learner begins to put words together to make sentences, gains meaning from sentences
- Child/learner begins to read short passages
- Length of sentences increases, builds to paragraphs
- Child/learner can explain meaning of paragraphs

Stage Seven: Skill Building Toward Fluency
- Child/learner practices skills by reading
- Child/learner learns new skills as presented
- Child/learner interest area leads to new reading areas

Figure 3 Reading development model (Marrapodi, unpublished)

There is progressive awareness about reading in the individual with increasing age and reading ability. A child who is under three generally has no print awareness and is unsure how the adult reads a story from a book. Preschoolers will describe reading as talking about the

pictures, but have no concept of the words or their function (Anthony, Lonigan, Driscoll, Phillips, & Burgess, 2003; Gateley, 2004). In pre-literate adults, such as immigrants from places like rural Liberia, there is no print awareness, and learners have a difficult time conceptualizing what a word is (Marrapodi, personal observation, 2006). These foundational skills of print awareness must be taught before skills such as the phonemic and alphabetic awareness can even be attempted.

Many beginning readers may not process the information contained in the passages they read. Beginning readers view successful reading as accurately decoding, or "sounding out" all of the words. Low comprehending students in second and sixth grade defined the purpose of reading as being able to "say the words right" (Myers & Paris, 1978, p. 682). Poor readers, like young readers, also attend more to decoding, whereas proficient readers know that making sense is the goal of reading. Beginning readers generally cannot describe any strategy they might use when comprehension fails (Campbell & Malicky, 2002; Cetinkaya & Erktin, 2002). This is true in both adults and children who are learning to read.

Younger children will read stories with conflicting information without challenging the misinformation, being satisfied with completing the passage as the mark of successful reading. Garner (1988) cites numerous studies of children reading passages that do not make sense yet not challenging what they have read, even though Skarakis-Doyle's (2002) research shows that as early as 30 months children have an awareness of error when they are listening to stories being read to them. Comprehension of a passage is the understanding of what has been read with the ability to feed that information back. It is also viewed as an active process of hypothesis testing and schema building, adding to existing information in the reader's previous knowledge. In

developmental studies, the process of metacognitive comprehension monitoring is regarded as

"the ability to evaluate and regulate one's understanding of incoming messages" (Skarakis-

Doyle, 2002, p. 176). When errors are not noted, one may question if the comprehension was

active and accurate.

Not challenging misinformation is not limited to children or beginning readers. Faulty

comprehension monitoring occurs in all readers. Skilled readers have the ability to read for

comprehension, but they may miss errors in a passage, whether explicit or inferred. In adults,

Winograd and Johnston (1982) found that 22% of good readers and 55% of poor readers failed to

identify explicit contradictions embedded in short passages. This "contradiction paradigm"

(Schommer & Surber, 1986; Winograd & Johnston, 1982) occurs more often in adults when the

passage is difficult. Winograd and Johnston argue that readers assume that the passage is error

free, so come to the task without anticipating mistakes. Pressley and Ghatala (1990) reiterate that

error detection has a number of shortcomings regarding its appropriateness for assessing

comprehension monitoring. However, they did find that

> (a) there are developmental improvements [in comprehension monitoring] from
> childhood to adulthood with monitoring especially poor during the early grade-school
> years; (b) monitoring is more likely to occur during a test than during study, although
> monitoring during a test is more certain during the later grade-school years; (c)
> monitoring is not perfect, even among adults. (p. 21)

In the United States, reading instruction is a part of every curriculum. In early elementary

grades, the focus of reading instruction is on skill development, then in middle grades, the focus

shifts to comprehension. Perhaps this provides some of the explanation of the low–literacy adults

not crossing from decoding to comprehension. They spend significant time learning the skills of

reading, and do not cross the developmental milestone of skill growth to move to comprehension

as most children do. Most students passing through the American school system pick up enough skills along the way to become relatively proficient readers (NEAP, 2000). Yet there are many who do not achieve this goal, including the functionally illiterate students who are the focus of this study. It would be an oversimplification to ask the American-born native-speaker of English (NSE), "Why haven't you learned to read in a country where education is mandatory and free for all?" The answer is not an easy one. There may be internal processing difficulties, but there may have also been poor instruction, poor curriculum, difficult environments or frequent absences from school (Atkinson, Wilhite, Frey, & Williams, 2002). Each of these provides different challenges for the literacy instructor and the ABE student.

The next section will focus on the NSE ABE student population, exploring some of their difficulties with reading.

Demographics of the NSE Adult Beginning Reader Population

A small sampling of three key studies shows consistent limitations in the NSE ABE population. First, learners report having difficulty with reading in their childhood schooling. The lower the adult reading level, the more likely there was remedial reading help in school. In the 2003 The National Center for the Study of Adult Learning and Literacy (NCSALL) Adult Reading Components Study of 676 ABE/ASE (Adult Secondary Education) learners in adult literacy centers, 65% of those reading at a 4th to 6th grade equivalent (GE) reported receiving extra help in reading in school, as compared to 45% of those at GE 7-8 and 35% of those at GE 9-12 (Davidson & Strucker, 2002). Therefore, many adults in reading programs who are reading at lower levels had recognized difficulties early in school that were not resolved even with extra help.

Second, there were family patterns of reading difficulty. In Greenberg, Ehri and Perin's (1997) smaller work with 72 low-literacy adults, 29% of the students had parents or siblings with reading difficulties. Third, there were issues with missed schooling and repeated grades. They missed critical instruction and practice in elementary school: 28% were absent for long periods of time. Twenty-five percent repeated grades one, two or three. Based on these statistics, many of these lowest literacy learners have been dealing with reading problems all of their lives.

Many of these learners operate in a shame-based paradigm (Gillespie, 1994). Many hide their problems and "fake it" when put into a situation requiring reading. Adult literacy teachers often share stories at conferences of students in their classrooms who were able to hide their reading disability from coworkers and families for much of their lives (Marrapodi, personal observation). Low-literacy learners become defensive and embarrassed when their reading problems surface. Adults are repeatedly frustrated that they cannot name the sounds that go with letters (Murr, 2001). They are often angry that "no one ever taught them what they needed to know in order to learn to read" (Murr, 2001, p. 25). One tutor observed that "if you don't read easily, you don't just avoid reading, you don't even see the words" (McKinney, 2001, p. 171). Most have developed coping skills that create the illusion of understanding. They believe that the "illusion of reading is just as good as reading… Until individuals admit they have a reading problem that affects their quality of life and that assistance is needed, improvement is impossible" (Stanfel, 1996, p 166).

It was McKinney (2001) who made the curious observation previously referred to: "People who can't read well consistently test at the second or third grade level regardless of age or schooling" (McKinney, 2001, p. 169). While this plateau phenomenon in adults is not

otherwise documented in the academic literature, a November 2004 discussion on the National

Institute for Literacy's (NIFL) Assessment listserv on the topic substantiates this claim:

> Growth does happen, but it is a subtle process that gradually influences adults in various
> ways in the cognitive, social, and emotional realms. There is often modest improvement
> on reading test scores, but for many of our students (if one were to use such a standard)
> third grade reading level would be a plateau that many would have difficulty crossing.
> (*National Institute for Literacy Assessment Discussion List*, 2004, # 764)

An additional comment further elaborates the phenomenon from the listserv discussion:

> Maybe the question really meant: "Do adults who do not know how to read plateau at the
> beginning levels?"…My answer to that question, based on fifteen years of experience,
> would be "Yes they often do." I have not known any adult who came from a literate
> culture, who did really not know how to read, who ever became a deft and fluent reader. I
> have known many adults who have learned a lot, but none however went from not being
> able to read simple words and environmental print to being able to read a book from
> Oprah's club. (*National Institute for Literacy Assessment Discussion List*, 2004, # 765)

 At the Harvard Adult Reading lab, adults reading at a grade equivalent of fourth to sixth

grade levels make much slower progress than those who test at seventh or higher (Davidson &

Strucker, 2002). It seems that at the lower reading levels of adult basic education, there is a point

that learners get stuck and have a hard time moving forward. Perhaps some of the descriptions

that follow can help explain why.

Marked Deficits in Some Aspects of Decoding Skills

One consistent characteristic of NSE ABE students is their problems with decoding

skills. These learners often have difficulty judging rhymes, one of the precursors to phonics.

When reading, they will often ignore letters in words (Greenberg et al., 1997). In general, these

learners have poor phonological awareness (Anthony et al., 2003; Durguno-lu & Öney, 2002;

Greenberg et al., 1997; Wright & Jacobs, 2003), which is the sound segmentation of the letters,

their combinations, patterns and the sounds they make. It includes the ability to manipulate,

substitute and differentiate the individual sounds (phonemes). Phonological awareness is the strongest predictor of future reading success for children (Adams, 2000). Phonological skill distinguishes more and less skilled readers, even at the college level. Phonological deficits are present in adults and children with no reading skills, in beginners at risk for reading failure, and in older disabled readers. The deficits diminish as students learn to read and spell successfully.

Tasks of phonemic analysis are especially baffling. Some NSE ABE learners cannot distinguish the differences in the sounds of letters in words. When asked if "dog" and "church" began the same or differently, one learner indicated that they were the same (Marrapodi, personal observation, 2005). Low-literacy learners experience great frustration on phonemic segmentation tasks. For example, if a learner is asked to remove the /k/ sound from cat, it is anticipated that they will be able to produce /at/. Many learners are unable to do this. Phonemic manipulation demonstrated through skills such as these, is the strongest predictor of reading acquisition (Hagar, 2001, NALLDC, 1999). It is also the most difficult for some NSE ABE students.

Bell and Perfetti's 1994 study of 29 adults compared ten skilled readers to nine low-level "normal" adult readers and ten dyslexic adult readers. Skilled readers could read nonsense words as fast as lower level readers decoded the most familiar real words. Nonsense word decoding is used to assess the reader's familiarity with the sounds of graphemes (letter representations of phonemes) and their ability to blend them to form a nonsense "word" such as "fom." They concluded, "The importance of pseudoword decoding as an indicator of reading skill for adults appears to be the same as the one found for children" (p. 248). This is one indicator that some of the research with children can be corroborated with adults. It also reinforces the notion that less skilled readers require additional time with decoding, appearing as a skill they have yet to

master. In contrast, skilled readers attacked nonsensical, unfamiliar word at the same rate as those with lesser skills processed the normal words. The skilled readers attacked the new, nonsense words as experts. The unskilled readers attacked all words as beginners.

There may be substantial differences between adults and children reading at the same grade equivalent (GE) level (Greenberg et al., 1997; Thompkins & Binder, 2003). In a comparison study matching children of normal reading abilities with parallel GE reading score adults, the NSE ABE students were found severely deficient on phonologically complex tasks (segmentation, deletion, and non-word reading) (Greenberg et al., 1997). When dealing with nonsense word decoding, the children viewed it as a game, while adults indicated uncertainty and trepidation. In this same study, the adults were better than the children on sight words at the appropriate level. While this is a notable difference, it continues to reinforce difficulties in many low-literacy ABE students' abilities to decode.

Potential Learning Disabilities?

The issues of phonological processing may be indicative of a learning disability in the NSE adult reader. This may have been what hampered their learning to read proficiently. Curiously, orthographic awareness, or the understanding of spelling patterns, tends to parallel reading level (Greenberg et al., 1997; Koda, 1999), possibly revealing some strengths and weaknesses. Orthographic awareness is generally much better developed than phonological knowledge in low-literacy adults. In orthographic awareness testing, the subject is presented with combinations of letters and asked to determine whether or not it could be a real word. Subjects with good orthographic awareness recognize that examples such as *fhtr* could not be words, and *chith* could be. They are not asked to recognize if they really are words, but if the pattern could

potentially be a word. Perhaps this is from more exposure to print over the adult's lifetime. This

pattern is similar in children who have been diagnosed with a learning disability. While he or she

may not be able to sound out words correctly, the subject can generally determine words that

follow the rules of conventional English spelling.

Adults in ABE programs have more similarities to young dyslexic readers or other

beginners at risk for reading failure than to typical elementary students reading at or close to

grade level. This may be indicative of learning disabilities within the NSE ABE population

When comparing the performance of ABE students and reading-disabled children, two

studies report that the reading skills of adult literacy students scoring below a sixth grade level

tend to resemble the reading of reading-disabled third through sixth grade children rather than

that of normally progressing younger readers (Davidson & Strucker, 2002; Greenberg et al.,

1997). While none of these studies explicitly say so, it is likely that many of the adult students in

the ABE classroom today are those dyslexic children who received extra help in the elementary

classrooms of their childhoods but never succeeded in learning to read.

These learners often have short-term memory issues (Thompkins & Binder, 2003) and

listening comprehension problems. From a neurological perspective, the central difficulty in

dyslexia reflects a "deficit within the language system, although other systems and processes

may also contribute to the difficulty....a deficit in phonology represents the most robust and

specific correlate of reading disability" (Shaywitz & Shaywitz, 2001, p. 11). Therefore, the NSE

low-literacy adult may be battling a language-related neurological issue.

There may also be foundational gaps occurring from the Matthew Effect (Stanovich,

1986). The concept of the Matthew Effect is based on the biblical concept of "the rich getting

richer and the poor getting poorer" found in the gospel of Matthew in the Bible. Children who have limited exposure to books and stories during their early years will have difficulty catching up with their peers who have a had foundation laid for literacy through early experiences and interactions with books. Studies demonstrate that the disparity between the learning curves of these two groups becomes exponential without this type of foundation (Stanovich, 1986). It is difficult to catch up and make up for lost time without a base to build upon. This may account for some of the adults in ABE classes: they have not been able to make up for the loss created by the Matthew Effect in their early years and the gap only continues to widen as they age without the benefit of reading. Having low-literacy skills deprives learners of exposure to the vocabulary and knowledge that good readers acquire through reading.

Coping Mechanisms and Reading Patterns

To survive, these adults have developed considerable coping mechanisms, or "bad habits" as Stanfel (1996) calls them. She lists five issues as listed in Table 4. Many of these "skills" allow the students to complete reading tasks in the classroom, but with no comprehension of the material.

In Stanfel's (1996) work, cheating is listed as the biggest coping strategy and the largest issue. Students copy from other students' papers, and have been caught peeking at the answer key in the entry exam. Copying has not been mentioned in other adult literacy studies and may be limited to required/mandatory programs such as hers. In an attempt to validate this, a question was posed to the National Center for the Study of Adult Learning and Literacy's Focus on Basics listserv (NCSALL, 2004). There were only two responses: one from a program administrator at a correctional facility who acknowledged that cheating was an issue in his center and another in a

welfare based program where cheating on attendance occurred because benefits were based on

attending. This may be an issue limited to certain settings where literacy program attendance is

mandatory.

Table 4
Coping Strategies in Low-literacy Readers - based on Stanfel (1996)

Topic	Example
Cheating	Peeking at answer keys on the TABE (Test of Adult Basic Education) and copying of other students' papers.
Word calling	A passage may be word-called without any attention to comprehension. When questioned about the passage, there will be no understanding. In more advanced students, ability to identify words and comprehend them is better developed, but they are also unable to answer questions about the story (Campbell & Malicky, 2002; Davidson & Strucker, 2002; Garner, 1981).
Guessing	When facing an unknown word the learner will use the first letter and guess on something from vocabulary whether or not it makes sense in the context of the words. When reading words on a word-recognition list, rather than use decoding, their preferred strategy is looking at the first syllable of a word and pronouncing the rest of it based on the first syllable (Davidson & Strucker, 2002).
Matching	Ability to match words from the story or definitions in a dictionary to successfully answer multiple choice questions even if there is no understanding. Some learners are able to complete workbook pages without understanding by adding letters in the desired pattern but never saying the words. In this case, context plays a compensatory role (Carlo & Sylvester, 1996; Thompkins & Binder, 2003).
Reliance on orthographic patterns	"Adults are focusing more on remembering particular words rather than on decoding words they do not know....rather than try to decode, adults try to recognize words, remember patterns, (e.g. of spelling), and apply similarities from words they do know" (Thompkins & Binder, 2003, p 254).

Some of these "coping skills" may also have been what allowed so many low-literacy

adults to get through the American school system. Amazingly, 37% of the adults who scored at

the below basic level on the NAAL were high school graduates or better.

The previously described observable reading behaviors illustrate some of what is

occurring with NSE beginning readers from an external perspective. The next section will

explore metacognition, or thinking about thinking, and examine what occurs internally during the reading process.

<div align="center">Metacognition</div>

As demonstrated in the previous section, the attainment of reading is a multi-layered, complex, developmental process. Metacognition is a also a multi-layered, complex, developmental process, evidenced as early as in preschool-aged children who see themselves and others as "knowers" (Kuhn, 2000, p. 178) and who use the concepts of thinking in their discussions with others (Kuhn, 2000). By the age of four, children have begun to realize beliefs drive people's behavior, may be different from their own, and may be false (Flavell, 1999). Metacognition develops gradually and unevenly in different areas (socially, academically, etc.) throughout the lifetime (Cromley, 2005).

In the last three decades, teaching metacognitive skills has been added to the list of the most effective theories in developing basic skill and comprehension during the reading process (Atkinson et al., 2002; N. D. Collins, 1994; V. L. Collins, Dickson, Simmons, & Kameenui, 1996; Downing, 1969; Garner, 1988; Hall, Bowman, & Myers, 2000; Jacobson, 1998). According to a 1993 National Center on Adult Literacy (NCAL) Technical Report, "a consistent finding [of studies regarding metacognition and literacy] is that good reading skills are associated with increasing ability to appraise one's thinking and to regulate one's reading, which are the two hallmarks of metacognition" (S. G. Paris & A. Parecki, 1993, p. 1). While skilled readers may intuit strategies to assist reading comprehension, poor readers do not. Numerous studies reveal that making reading strategies explicit to developing readers helps learners to adopt them in the reading process (Atkinson et al., 2002; Cetinkaya & Erktin, 2002; N. D.

Collins, 1994; V. L. Collins et al., 1996; Cromley, 2000; Garner, 1988; Garner & Alexander, 1989; Jacobs & Paris, 1987; Jacobson, 1998; Loxterman, Beck, & McKeown, 1994). Kirby and Moore (1987) theorize that "many children may be failing in reading, not because they lack ability or the basic reading skills, but, rather because they lack the awareness of how and when to employ those skills" (p. 119).

Metacognition researchers believe that knowledge about cognition is "closely related to and predictive of cognitive performance…Individuals who have more knowledge of their own thinking processes and strategy use are expected to be more likely to apply this knowledge, resulting in better performance" (Lin, Moore, & Zabrucky, 2000, p. 738).

Beyond cognitive performance, metacognition has been linked to intelligence, though it is not exclusive to bright students. Gifted learners use more strategies flexibly (Cetinkaya & Erktin, 2002), however, all students with high awareness about metacognitive strategies score higher than other children on reading tests, cloze tasks (fill in the missing word, i.e. the spotted ____ ran) and error detection tasks. The literature consistently demonstrates that better readers have better metacognitive skills (Bonds & Bonds, 1992; Garner, 1988). Children who receive instruction on the metacognitive strategies used in reading see improvement in their comprehension skills. Logically, this research with children is suggestive that increasing the metacognitive strategies of the poor readers found in adult basic education programs could better equip them for comprehending text. Arming them with the "how" that metacognitive strategies offer could provide them with stronger comprehension skills.

Metacognition versus Cognition

Metacognitive skills used in reading are different from the actual thinking process of comprehension, which is considered a cognitive skill. Metacognitive knowledge is different from cognitive knowledge, which is comprised of those skills that help a person perform a task, such as decoding skills, syllabification, phonological and orthographic pattern awareness. Cognitive skills in the reading process include encoding, inferring, comparing and analyzing. "Cognition refers to the actual processes and strategies that are used by the reader and metacognition is a construction that refers, first, to what a person knows about his or her cognitions and second, to the ability to control these cognitions" (Juliebo, Malicky, & Norman, 1998, p. 25). Cognition is the acquisition and processing of information, while metacognition is the executive management and strategic knowledge of the acquisition and processing. Cognition is the doing and knowing and metacognition is the how-to of selection and direction. Metaphorically, cognition is the worker (Hartman, 2001), and metacognition is the manager. Simply put, metacognition is thinking about thinking.

Metacognition is "a multidimensional array of self-constructed, regulatory skills that span a variety of diverse cognitive domains" (Schraw, 1998, p. 89). Most reading process decisions are made below the threshold of consciousness. To obtain an individual's metacognitive knowledge, he or she describes the subconscious processes that occur during a task as they occur, or by reflecting on them outside of the task. Metacognitive reading skills include asking questions of the text, rereading passages, taking notes and generally being cognizant of understanding. Metacognition involves the knowledge and regulation of these cognitive skills

(Blakey & Spence, 1990; Cetinkaya & Erktin, 2002; V. L. Collins et al., 1996; Cunningham, 1984).

Metacognitive Influence on Learning

How much influence does the executive control of metacognition play on the reading process? According to Hartman (2001), "Metacognition is especially important because it affects acquisition, comprehension, efficiency, critical thinking, and problem solving. Metacognitive awareness enables control [and] self-regulation over thinking and learning processes and products" (p. xi). The self-regulatory process of metacognition leads and improves achievement, allowing individuals to better manage their cognitive skills and recognize weaknesses of comprehension (Schraw, 2001). It is the interaction of cognition and metacognition that promotes reading comprehension in an individual (Garner, 1988).

Hartman and Sternberg (1993) developed the BACEIS model (Figure 4) for intellectual processing affecting the development, retention, and transfer of thinking and learning skills that illustrates the interaction between cognition and metacognition as one small component of learning. Metacognition and cognition are two components of the cognitive system, which along with the affective system, are part of the internal processing supersystem. The internal aspects interact with the external factors of academic and non-academic factors in conjunction with behavioral aspects. The BACEIS acronym stands for the following: B =behavior, A=affect, C=cognition, E=environment, I=interacting, S=systems. While this model is systemic and encompasses a global view of the factors influencing academic performance of tasks such as reading, it provides an excellent view of the roles of metacognition and cognition in learning.

ANTECEDENTS
(Internal & External Supersystems)

INTERNAL SUPERSYSTEM

Cognitive System

Affective System

Metacognition

Cognition

critical thinking

creativity

learning strategies

Motivation

Affective Self Regulation

attitudes

CONSEQUENTS

Behavioral System

EXTERNAL SUPERSYSTEM

Teacher Characteristics

Content

Instructional Techniques

Class/School Environment

Family Background

Cultural Forces

SES

Academic Contextual System

Nonacademic Contextual System

= 2 way interaction
= feedback

Figure 4. BACEIS model.
Note: From *Metacognition in learning and instruction: Theory, research and practice (Vol. 19)* by H..J. Hartman,
2000. p. 45. Dordrecht, Netherlands: Kluwer Academic Publishers. Used with permission

Theories of Metacognition

The literature incorporates a variety of definitions about what metacognition involves. All mention aspects of the individual's control of the process being considered. Livingston (1997) calls metacognition "higher order thinking" which involves "active control" over the cognitive processes engaged in learning. It is awareness, monitoring, and regulating of one's cognitive processes (Bonds & Bonds, 1992; Loxterman et al., 1994). It is referred to as one's inner language dealing with self-knowledge about cognition, and the ability to be able to influence one's own thinking (Vaidya, 1999).

Flavell's early work in the 1970s is usually cited as the initiating point of metacognitive research. He breaks metacognition into two arenas: knowledge about the processes needed to perform the task and metacognitive experiences and regulation of them. The knowledge processes include three variables as listed in Table 5.

Table 5
Flavell's Three Types of Metacognitive Variables

Variable	Attributes
Person	How humans learn and process information
	Individual learning processes
Task	Deal with the nature of the task
	Processing demands to complete it
Strategy	Knowledge about cognitive and metacognitive strategies
	Knowledge of when and where to use these strategies

Flavell's (1992) definition includes the individual's sensitivity to the need to use metacognition. The selected strategies are sequential processes that one uses to "control cognitive activities" and to ensure that a cognitive goal has been met. According to Flavell, metacognitive experiences are "any conscious cognitive or affective experiences that accompany

and pertain to any intellectual enterprise" (Flavell, 1992, p. 998). Regarding reading, the task

variables would help the learner determine how to read the passage, the strategy variables would

involve the choices to look at headings, charts, and self-questioning, and the person variables

would vary between the individuals and personal learning styles.

According to Anderson (2002), metacognition combines various "attended thinking" (p.

5) and reflective processes. His division has five primary components:

1. Preparing and planning for learning

2. Selecting and using learning strategies

3. Monitoring strategy use

4. Orchestrating various strategies

5. Evaluating strategy use and learning

Blakey and Spence (1990, p. 4) consider metacognition a three-step process:

1. Connecting new information to former knowledge

2. Deliberately selecting thinking strategies

3. Planning, monitoring, and evaluating the thinking processes

Adult learning theory emphasizes the importance of connecting new information to the existing

knowledge base, so step one of Blakey and Spence's metacognitive process is an important

aspect in discussing metacognition in adults.

Similar to Flavell (1992), Paris and A. D. Parecki (1993) segment metacognition into

self-appraisal and self-management. Self-appraisal of the cognitive process includes three types

of knowledge: *declarative knowledge*, or what affects the learning; *procedural knowledge*, or

how the strategies operate; and *conditional knowledge*, which is the understanding of why and

when to use strategies. Their three types run parallel to Flavell's categories, and their self-management is similar to Anderson's (2002), incorporating planning, evaluation, and regulation.

All of these theorists' strategies incorporate something about the selection of a strategy then the assessing of its effectiveness. From the literature, metacognitive knowledge seems to be relatively stable information about cognition and cognitive processes, but it is a skill that can be learned and improved as demonstrated by the studies on teaching metacognitive strategies for reading effectiveness (Cetinkaya & Erktin, 2002; V. L. Collins et al., 1996; Cromley, 2005; Gambrell & Heathington, 1981; Garner, 1988; Hall et al., 2000; Underwood, 1997). As low-literate adults increase their reading skills, metacognitive processing can be taught to assist them with the transition to comprehension of information and comprehension monitoring.

Metacognition is Developmental

Like many processes of growth and development, metacognition is developmental. According to Kuhn (2000),

> Young children's dawning awareness of mental functions lies at one end of a developmental progression that eventuates in complex metaknowing capabilities that many adults do not master. During its extended developmental course, metacognition becomes more explicit, powerful, and effective, as it comes to operate increasingly under the individual's conscious control. (p. 178)

Metacognition develops with age and experience. By the age of three, young children use words like think and know (Kuhn, 2000), and by four they begin to understand that others may have different perspectives than they do, indicating that they have begun to build foundational understanding about the thinking process. Young children are less likely to display either the knowledge or control components of metacognition that older children have gained and are able

to verbalize. By adulthood, people can generally be reflective about their thinking and verbalize the strategies they use to describe how they know what they know.

Cognition is also developmental. The main things that develop are (a) basic processes, (b) strategies, (c) metacognition, and (d) content knowledge (Flavell, 1992). Children love to learn and this promotes cognitive development.

Schraw (1998) sees cognition and metacognition as two of three steps in a constructivist mental development model progressing to higher order thinking. At the *Cognitive Level* (Level One), there is domain-specific knowledge and strategies with limited transfer to other domains. Level Two is the *Metacognitive Level*, where information becomes domain-general, self-regulatory knowledge and there is some cross-domain transfer. Here, construction of metacognitive knowledge comes from reflection and interaction with peers. At the final level, the *Conceptual Level*, individuals have mental models of a phenomenon, where learning is guided by personal theories. At the conceptual level, there is broad transfer between domains, and continuous testing and revision of mental models. At this level, reflection on the information is crucial to knowledge construction.

In this research, the researcher explored the task and process monitoring aspects of adult learners as they described their thinking during reading and during their area of strength or expert skill.

<center>Metacognition and Reading</center>

It is challenging to develop an understanding of the metacognitive processes of beginning readers. It is not so much that young children have no knowledge of their cognitions during reading, but rather that their knowledge and ability to express it is limited as compared to that of

older children (Garner, 1988). Older and more successful readers know more about themselves

as learners, realizing that they approach different genres in distinct ways, and that they use more

reading strategies (Garner, 1988). Older children who have had more experience with text and

years of schooling are more aware than younger children of the effects of many variables on

reading and the utility of strategies of comprehension (Juliebo et al., 1998).

According to O'Sullivan and Joy (1994), all readers have metacognitive knowledge about

reading. Metacognitive knowledge about reading includes any understanding of, or belief about,

reading and readers. These concepts would be considered components of Flavell's (1992) person

variables and Paris and A. D. Parecki's (1993) declarative variables.

One's perception of one's ability to perform a task have a more critical influence on

behavior than task incentives or actual personal skill (Garner & Alexander, 1989). This self-

assessment of skills reveals itself in comments like, "I'm stupid, I'll never get this; I'm just a bad

reader" (Marrapodi, personal observation) and can override the student's actual abilities.

Bandura's (1989) work looks at self-efficacy, or belief in the ability to be able to do something

as key to the cognitive processes:

> Effective functioning rests heavily on inferences about conditional relations between
> events that enable people to predict and control those events that are of import to them.
> Discernment of the predictive rules requires effective cognitive processing of
> multidimensional information that contains ambiguities and uncertainties. … People's
> perceptions of their efficacy influence the types of anticipatory scenarios that they
> construct and reiterate. Those who have a high sense of efficacy visualize success
> scenarios that provide positive guides for performance and they cognitively rehearse
> good solutions to potential problems. Those who judge themselves as inefficacious are
> more inclined to visualize failure scenarios and to dwell on how things will go wrong.
> Such inefficacious thinking weakens motivation and undermines performance. (p. 729)

As adult educators, we must be aware of our students' beliefs as part of their metacognition about reading and their personal abilities around it. If these beliefs are disempowering, they have the potential to sabotage the learners' success.

In regard to reading, understanding the metacognitive processes of an individual allows the teacher to determine misperceptions that may be occurring and limiting strategies that may be hampering comprehension. According to O'Sullivan & Joy (1994), "readers use their metacognitive representations, both accurate and naive, to understand and regulate their own reading behavior" (p. 118). Metacognition helps readers assess and adjust their reading behavior to the characteristics of the text, which results in better reading and more comprehension (Bonds & Bonds, 1992). One of the main purposes for metacognitive monitoring is to detect and correct misunderstanding during the reading process (Cromley, 2005). Pressley and Ghatala (1990) also point out the importance of the direction set in the instructions and purpose for reading as something that impacts the self-regulation of learning, but it remains within the locus of control of the reader to monitor comprehension. Metacognition emphasizes active participation by the reader in task analysis and strategic reading (Cetinkaya & Erktin, 2002).

Sandiford (1984) uses the term *metacomprehension* for this type of processing, which she defines as the "awareness of and conscious control over one's own understanding or lack of it" (p. 1). Metacomprehension is the metacognitive processes around comprehension of text. She identified four levels of metacomprehension, which may be illustrated by a matrix of comprehension and metacomprehension awareness as shown in Table 6.

Metacognitive skills fall under the category of high metacomprehension for good readers and low metacomprehension for poor readers. Good readers may not be explicitly aware of their

metacognitive skills, but when asked, they can usually be explained. Poor readers generally do

not understand why their peers are better readers. They often do not realize there is something

missing in their comprehension. This is an example of the low comprehension and low

metacomprehension. They are no understanding and not aware that they are not. In some cases,

there may also be the "illusion of knowing" (Schommer & Surber, 1986, p. 353).

Table 6
Metacomprehension Matrix and Student Knowledge

Comprehension	Metacomprehension	
	High	Low
High	students who know aware that they know	students who know think they do not know
Low	students who do not know realize they do not know	students who do not know think they do know

Kirby and Moore's (1987) research on reading and metacomprehension showed general

increases in metacognitive abilities with age. They noted that the high-ability sixth graders in

their study had a quantifiably higher performance of metacognitive skills.

> [They] appear to have mastered the basic decoding and comprehension tasks in reading
> and have begun to acquire a deeper metacognitive appreciation of the nature of reading
> comprehension… Whereas basic comprehension can occur in a relatively automatic, non-
> strategic fashion, metacomprehension shows deliberate planfulness, an appreciation of
> processing alternatives, and some awareness of how reading does or should work. (p.
> 133-134)

Kirby and Moore acknowledge that metacomprehension seems to have many of the same skills

required in Piaget's formal operations stage, although they do not see it as an age-correlated

developmental process. Kirby and Moore recommend that the teaching of metacognitive skills

become part of the reading process to assist with comprehension monitoring and semantic awareness.

It is encouraging to realize that metacognitive skills can be modeled and taught. Research has consistently demonstrated that teaching metacognitive skills in conjunction with other methods of reading instruction significantly improves comprehension (Garner, 1988; NPR, 2000). This makes a strong argument for explicitly teaching them.

Comprehension monitoring is a significant aspect of metacognition. In developmental studies, the process of comprehension monitoring is regarded as the ability to evaluate and regulate understanding of incoming messages. Good comprehension monitoring identifies comprehension obstacles. It is recognizing something is not understood and asking for it to be repeated if presented orally, or reread during reading. Faulty monitoring occurs more among younger listeners than among older listeners and more among less skilled readers than among skilled readers, but it occurs quite frequently among listeners and readers of all ages and language proficiency levels (Garner, 1988).

Those adults with poor reading comprehension show the least evidence of monitoring. They do not notice when they do not understand. They utilize few strategies such as prediction, question generation and summarizing (Cromley, 2005). However, comprehension monitoring is not an "all-or-nothing skill for a reader; it also depends on the text, including factors such as familiarity with the content, vocabulary and type of writing" (p. 192). Readers may also be working with limited working memory capacity.

Monitoring and self-awareness are key components of reading comprehension (NPR, 2000). According to Underwood (1997), these skills are important for new as well as established

readers. "Beginning readers need self-awareness and self-assessment capacities in order to learn to recognize words and gain fluency, and older readers need similar capacities in order to read to learn from content-area textbooks and from serious works of literature" (p. 77). These skills are part of the metacognitive direction of the cognitive process whether the reader is new or experienced.

Vygotsky considers learning to direct one's own mental processes with the aid of words and signs an integral part of concept formation. In his four-stage model, the Zone of Proximal Development (ZPD), the metacognitive processes occur in all stages, but are primarily activated in Stage Two when the scaffolding assistance of Stage I is removed (Belmont, 1989; NCREL, 2004). This model is illustrated in Figure 5.
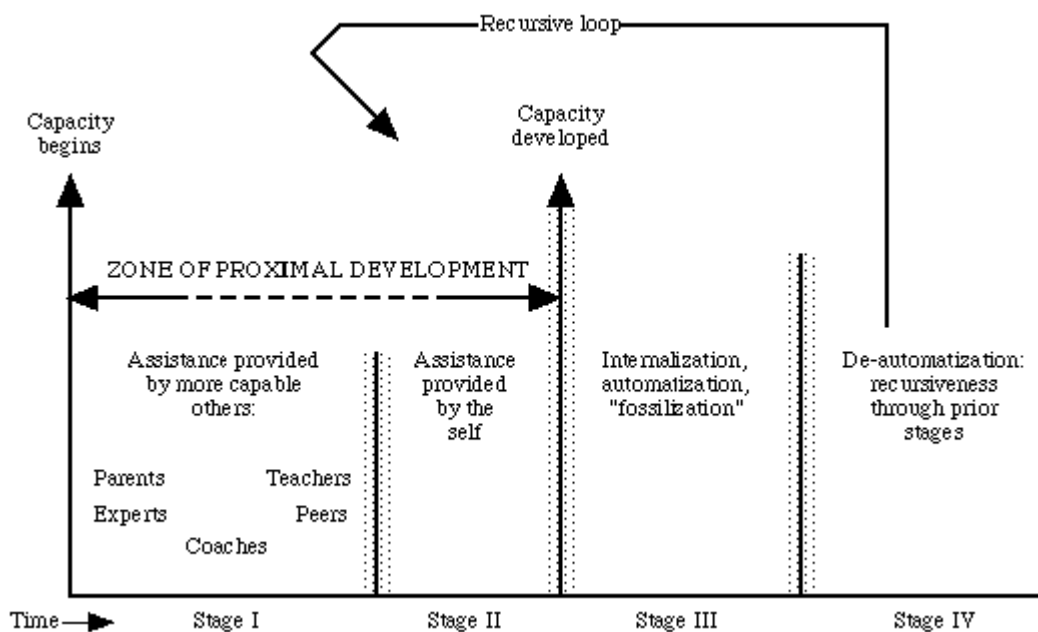
Figure 5. Vygotsky's Zone of Proximal Development as described by Tharp and Gallimore.
Note: From *Four-Stage Model of ZPD*. NCREL. (2004). Retrieved 5/28/2005, 2005, from
http://www.ncrel.org/sdrs/areas/issues/students/learning/lr1zpd.htm. Used with permission.

The low-literacy adult beginning reader may never cross beyond the outside assistance provided in stage one of the Zone of Proximal Development. Potentially, the metacognitive assistance provided by the self (Stage II) is not occurring, which may be why these learners have such a difficult time explaining their strategies, as Garner (1988) discusses in her work. This may also be one hypothesis as to why these learners do not cross the second/third grade equivalent reading level for comprehension because the process has not become internalized. The Adult Literacy and Education Wiki (*Adult literacy education: Research and practice*, 2005) further suggests that the adults may never invest in practice time outside of the classroom to develop this internalization. Ideally, developing readers work with a teacher/parent (Stage I) to learn the skills, then practice individually with self-coaching (Stage II), utilizing metacognitive strategies until the methodologies become internalized and fossilized in Stage III.

These particular metacognitive processes allow the learner to step back and assess what is being learned and understood and thus build new concepts. Jacob and Paris' (1987) consideration of the metacognitive self-appraisal process includes looking at the declarative, procedural and conditional components to insure understanding of the how, what and why of the passage.

Strategies that readers use to aid faltering comprehension include searches for the source of the difficulty, rereading passages, recognizing implicit ideas in a text, incorporating compensatory strategies such as backward and forward search strategies, and self questioning (Loxterman et al., 1994). While these may seem obvious to the experienced reader, struggling readers only use rereading among these metacognitive methods. They do not think to use the others (if they know about them) when there is a problem, and often do not realize that they have not understood what they have read and are not aware that these methods would help them.

Metacognitive Differences between Good and Poor Readers

The defining factor in determining whether one is a good reader or a poor reader is comprehension. One of the key metacognitive differences between good readers and poor readers is the ability to select and utilize comprehension strategies. According to Cromley (2000), more than 150 strategies showing differences in thinking between good readers and poor readers have been identified.

In looking at the relationship between reading ability and metacognition, Bonds and Bonds (1992) say that good readers generally:

> begin reading strategically and integrate information from contextual and semantic sources during reading. As they become better readers, they appear to sample information from text automatically without having to examine the structure of words. Poor readers, on the other hand, are not efficient in their ability to use words as sources for information. They may rely more heavily on information from contextual sources to gain meaning. They may concentrate on pronouncing the words in the selection at a conscious level. These differences in the reading act appear to be the result of differences in metacognitive knowledge. (p 57)

Yin and Agnes (2001) confirm this: "Poor readers, unlike good readers, have little awareness that they must attempt to make sense of text" (para. 5). Less successful readers view finishing the task as more important than comprehension as the goal for reading. In bilingual studies with poor readers, this pattern was similar with all text types and both languages (Eskey, 1997; Holt, 1995; Rance-Roney, 1997).

In breaking down words for decoding, students who are poor readers often rely heavily on context to decode words (Atkinson et al., 2002). Poor readers will guess at something that might make sense, or they will guess at something that begins with the first letter of the unknown word regardless of overall passage comprehension. As shown, it is most likely that they have not

comprehended the passage. Efficient readers rely more on decoding the elements of the word itself rather than simply relying on the context of the passage.

Good readers make more strategic choices than poor readers. Kletzien (1991) found that while poor readers knew the same number and kind of strategies as good readers, their regulation and use of these strategies was far less effective (NPR, 2000). In looking at learning-disabled children, "students appear to use no strategy, randomly attacking the act of reading, others use strategies that are ineffective or inefficient" (Atkinson et al., 2002, p. 160). In general, students with learning disabilities may experience difficulty approaching tasks strategically with a focus on organizing and monitoring their own thoughts about reading. The problem is not confined to learning-disabled readers but appears in most poor readers.

Like beginning children readers, poor adult readers do not realize when a passage is incomprehensible. It appears that they do not know that they should check their comprehension. They lack the strategies for doing so, and fail to make the necessary repairs (Cunningham, 1984; Jacobs & Paris, 1987) in their lack of understanding. When students in elementary and middle schools notice that they no longer remember information they have read, many do not intentionally re-inspect portions of a text that might provide the information. This also occurs in adults with reading difficulties. Brown and Campione (1986) comment

> Poor readers fail to monitor their comprehension deeply enough to permit them to detect violations of internal consistency or even just common sense, and they rarely take remedial action even if an error is detected; their comprehension-monitoring faculty is either weak or non-existent. (p. 1063)

Brown (1984) sees this not necessarily as a deficit in the learner, but an issue of awareness. She addresses the functioning of a skilled reader dealing with comprehension as follows:

> [Skilled readers] operate with a lazy processor. All of that reader's comprehension and decoding skills are so fluent that he or she can proceed merrily on automatic pilot, until a triggering event signals a comprehension failure. While the process is flowing smoothly, the reader's construction of meaning is very rapid, but when a comprehension failure is detected the reader must slow down and allot extra processing capacity to the problem area. The reader must employ debugging devices or strategies that take time and effort. (p. 118)

The unskilled reader, however, is unaware of the problem and need to "debug" the issue.

Good readers know more about reading strategies, detect errors more often while reading, and have better memory for text than poor readers. Skilled readers use a variety of tactics and often predict what happens next in a story. They look forward and backward in the passage and check their own understanding as they read (Jacobs & Paris, 1987). In a study in Singapore, express course students demonstrated a greater awareness of metacognition and knowledge of it (Yin & Agnes, 2001). (Express course students are equivalent to U.S. secondary students, being in the middle of a three level tier structure: Special Course for advanced students, Express for above average, and Normal for average and below average students.) Gifted students know and use more metacognitive strategies and generally fall into the better reader category, but metacognition is not exclusive to them, nor is metacognition strongly related to other traditional measures of intellectual ability (Schraw, 1998).

The following two sections will examine the developmental processes of metacognition and review the differences between metacognition in adults and children.

Metacognition in Reading in Children

It is important to consider metacognition in children when analyzing the metacognition of adult beginning readers. Many of the developmental patterns are expected to be similar, as with the similarities in reading development between adults and children.

Metacognitive skills and the ability to explain them increase with age in children (Skarakis-Doyle, 2002). They also increase with skill development and expertise in any area. Metacognition is essential to learning (Hartman, 2001). Beginning adult readers must undergo the same learning patterns as children when gaining skill in reading. Because metacognition is developmental, one must examine how a child determines and monitors comprehension of information at different stages of development to ascertain if there are insights into the thinking of the NSE learners being studied in this research project.

Young readers are not aware that comprehension is the primary reason for reading. As young children begin to learn to read, many believe that the purpose of reading is to pronounce all the words without mistakes. Many think that good reading includes verbatim recall of the text (Downing, 1969). Younger and less mature readers do not concentrate on textual features because they are not aware of the impact text structures have on learning. They believe that success is heavily influenced by effort and, therefore, very much within the control of the individual (Hall et al., 2000). When asked about what causes reading difficulty, children believe it is the effort of the individual. In Hall's research they "implicated insufficient effort as the cause of the problem even for children who were described as hard workers" (p. 9). In Poissant's (1994) work, adult low-literacy readers give "peripheral definitions [of what reading comprehension is]. For the majority, to understand is equivalent to 'hearing sounds'" (p. 10).

According to Garner (1988), children, particularly younger and poorer readers, "often rely on a single criterion for textual understanding: understanding individual words. These children are unlikely to question information that seems inconsistent with either their own experience or other parts of text as long as the words make sense to them" (p. 145). Poor readers, whether children or adults, lack strategies to grasp textual meaning and regulate comprehension (Gambrell & Heathington, 1981; S. G. Paris & A. D. Parecki, 1993; Poissant, 1994). As they develop skills, they begin to become aware of their strategies for reading, and by middle school, seem to be aware of the things they need to do during the process to be successful.

When beginning to read, children are generally so focused on decoding, they do not pay attention to the content for comprehension. They are often unaware of errors within their own reading.

Younger and less proficient learners also have a difficult time with text summarization. When called upon to produce a synopsis of what they have read, they have difficulty determining which information should be included. They often do not apply deletion, substitutions, and topic sentence rules to condense the original text. Invention of topic sentences and integration of information are particularly difficult (Garner & Alexander, 1989). This lack of synthesis is not surprising, as evidenced in other areas, including the rambling conversations a child will have in telling a story or in show-and-tell demonstrations.

According to Viise and Austin (2005), poor adult readers are comparable to eight and nine year olds in their metacognitive knowledge about reading. It is possible that there is a developmental delay in the metacognitive processes as well as the reading skills. However, "adults tend to have more knowledge about their own cognition and are better able to describe

that knowledge than children and adolescents" (Schraw, 1998, p. 90), therefore they may be

better equipped to explain their thinking about thinking. The next section will explore

metacognition in adult readers.

Metacognition in Adult Readers

According to Venezky and Sabatini (2002), "Interest in the basic perceptual and

cognitive processes of adults learning to read is a phenomenon of the last three decades, with few

sustained research programs, few standardized measures, and limited agreement on how to

define experimental populations" (p. 217). Gambrell & Heathington (1981) made the same

remark in their research twenty years ago regarding the lack of metacognitive research with adult

disabled readers. Their study is one of the few available in the literature. This is consistent with

the limited information found in search of material for this section.

Poisssant's (1994) reading study with adults comments that a beginning reader who

struggles with decoding:

> clutters his or her short term memory. The size of the information chunks is considerably
> shortened. Such readers quickly forget what they have just processed, which impairs
> comprehension…[Additionally], few low-literate readers are aware of the relation
> between reading comprehension and decoding skills. (p. 12)

In this same study, when asked about comprehension, half of the low-literate population

described it as "hearing or memorization" (p. 4). They explained something as incomprehensible

based on the vocabulary used or the characteristics of the speaker, such as accent, even though

the discussion was about written language.

Gambrell and Heathington's (1981) comparison study looked at the differences between

the way 28 good and 28 poor readers understood the reading process. Adult good readers

understood the task and strategy dimensions of reading, whereas the poorer readers had limited

knowledge of them, especially in regard to the available strategies. Poorer reading adults were unaware of the structure and organization of a paragraph and story. Like the younger and weaker reading children, they were unable to distinguish a theme or common topic in paragraphs.

Similar to young children and poor readers in childhood, poorly reading adults perceive reading as "a decoding process rather than as a meaning construction or comprehension task" (Gambrell & Heathington, 1981, p. 220). They believed it was easier to read word-for-word than for general meaning, and felt that reading aloud was more efficient than silent reading.

Venezky and Sabatini (2002) report that adults tend to use more visual/orthographic (spelling and word structure patterns) strategies when encountering word recognition problems, whereas children reading at the same grade equivalent use decoding and other phonetic strategies for both word recognition and spelling. When either adults or children are poor readers, they rely on recognition of all the words as reading success rather than comprehension.

An oddity for beginning readers with weak decoding skills is that they remember unusual, high-interest words with distinctive letter patterns and sounds more easily than many common sight words and words on high frequency lists (Marrapodi, personal observations). These include uncommon names such as Constantinople and Timbuktu in *Hop on Pop* by Dr. Seuss. The student beams with delight for recognizing such "big" words. Certain sight words, such as the functionally illiterate person's name are accurately recognized (Poissant, 1994). This is in alignment with their focus on the visual patterns rather than the phonemic elements. These multi-syllabic words are much more complex that the simple three and four letter words in the rest of the story. There is also an emotional connection to the person's name, making it highly desirable to learn.

When poorer adult readers need assistance with comprehension, they often refer to an external source, such as another person rather than re-referencing the text to find the information (Gambrell & Heathington, 1981). They may be unaware of strategies available to them.

In Myers and Paris 1978 work, low-literacy adult readers were unaware of how and when to use specific strategies. This study evaluated second and sixth graders and low-literacy adult readers for strategy use. The low literacy adult performance was in closer alignment to the second graders' strategy use and selection than the sixth graders'.

Adults bring more experiences to the reading process, so they generally have an advantage over children for understanding the information they read. However, Cromley's (2000) study exploring the strategies used by adults found that "adult literacy students' lack of background knowledge makes them prone to many thinking mistakes, especially belief biases, the availabile heuristic, and confirmation biases" (p. 238). Low-literacy learners generally have a limited scope of experiences and may be unfamiliar with the topic being read, partially because of their inability to read. Teachers need to supplement vocabulary and describe situations that the authors of materials write about as part of the pre-reading process. Since reading is such a developmental process, Stanovich's (1986) Matthew principle (mentioned earlier) comes into play here and those with poor reading foundations feel poorer, realizing the existing knowledge gaps. Having low-literacy skills deprives learners of exposure to the vocabulary and knowledge that good readers acquire through reading. One of the ways the ABE curriculum helps compensate for this is through the use of learner-built materials, including stories created using a language experience approach and compilations of short stories written by classroom learners.

Russell (1999) reports an intriguing phenomenon regarding the way adults process reading for writing tasks. She consistently found that adult basic education students said they could not write about a subject they had no personal experience with even though they had just read information about it. Reading to learn was not considered. "It was not that the learner did not understand the piece, but that she believed she could not learn by reading" (p. 2). She learned that this concept of reading to learn must be verbalized to the students. She also realized that the students had a misperception that good writing comes perfectly the first time. When given pieces to edit, there was resistance to revision. Grammar could be edited but the restructuring and rearranging of ideas was a difficult concept to convey. Trouble with conceptual reorganization in writing aligns with the thinking about reading of words versus reading for ideas. Poor adult readers, then, need explicit strategy instruction regarding the writing, as well as the reading process.

The next section explores strengths-based approaches, expertise and the transfer of knowledge in learning. This research explored the interviewees' self-defined areas of strength, talent or expertise, looking for potential connections for transference to assist with the reading process.

<div align="center">Strengths, Expertise and Transfer of Learning Theory</div>

Strengths-Based Perspective

Strengths-based philosophy advocates perceiving individuals for their positive qualities rather than deficits. In this methodology, people are trained to look at clients and students from a positive, strengths-based perspective, rather than from a deficit model (Hewitt, 2005; Weick,

Rapp, Sullivan, & Kisthardt, 1989; Yip, 2005). The focus is on the abilities that the individual

possesses, with the assumption that

> the quality of growth is enhanced by attending to the positive abilities already expressed,
> rather than to their absence. A singular focus on the strength already expressed is the
> vehicle through which additional talents and abilities can be developed…The fact that
> people have lacks is acknowledged, but the best strategy for supporting further gains is a
> conscious emphasis on the gains already made (Weick et al., 1989, p. 353).

For the purposes of this study, there are implications that the potential focus on the

learner's strengths may be leveraged to support further gains in reading. In the strengths-based

model, assessment is multi-dimensional, looking for personal and environmental strengths as

well as resources within the support community. Resiliency factors are considered (Saleebey,

1996) considering resiliencies are "strengths honed in the struggle with hardship" (Wolin, 2003,

p. 19). There is a philosophical leaning toward empowerment, believing that "Practicing from a

strengths perspective means believing that the strengths and resources to resolve a difficult

situation lie within the client's interpersonal skills, motivation, emotional strengths, and ability to

think clearly" (Cowger, 1994, p. 266). Potentially, these abilities can be leveraged to assist the

adult learning to read.

Much of the focus of the strengths-based literature is on the attitude of the practitioner,

looking for a "re-vision[ing]" (Saleebey, 1996, p. 297) of perspective. For the adult literacy

practitioner, it means re-examining biases, and looking for what the learner has that might

strengthen what s/he does not have. According to Saleebey (1996)

> The strengths perspective demands a different way of looking at individuals, families,
> and communities. All must be seen in the light of their capacities, talents, competencies,
> possibilities, visions values, and hopes, however dashed and distorted these may have
> become through circumstance, oppression, and trauma. The strengths approach requires
> and accounting of what people know and what they can do, however inchoate that may

sometimes seem. It requires composing a roster of resources existing within and around the individual, family, or community. (p. 297)

Strengths are "trait-like qualities that reside within the individual" (Wolin, 2003, p. 18). Peterson and Seligman (2004) believe that individuals identify between three and seven character strengths that they "own, celebrate and frequently exercise" (p. 18). Peterson and Seligman (2004) identify these as signature strengths, and use these characteristics as criteria for defining them in an individual:

> [1] a sense of ownership and authenticity ("this is the real me") vis-à-vis the strength
> [2] a feeling of excitement while displaying it, particularly at first
> [3] a rapid learning curve as themes are attached to the strength and practiced
> [4] continuous learning of new ways to enact the strength
> [5] a sense of yearning to act in accordance with the strength
> [6] a feeling of inevitability in using the strength, as if one cannot be stopped or dissuaded from its display
> [7] the discovery of the strength as owned in an epiphany
> [8] invigoration rather than exhaustion when using the strength
> [9] the creation and pursuit of fundamental projects that revolve around the strength (p.18)

Wolin (2003) points out that strengths may be learned. They may be taught by parents. They coexist in individuals with weaknesses and vulnerabilities, but these strengths may be "mobilized to find solutions" (Wolin, 2003, p. 19).

Strengths are different from talents. Talents, according to Peterson and Seligman (2004) are more innate, tend to be immutable and less voluntary than strengths. Talents, like strengths, can be leveraged for learning:

> People learn from the world around them, through formal education or through the distilling of their day-to-day experience. Clients can often surprise practitioners (and themselves) with the talents they have (or once had but let fall into disuse or out of memory). Such talents, whether juggling, cooking, baking bread, or tending to the needs of the ill, may become tools for helping to build a better life. (Saleebey, 1996, p. 299)

Skills are learned abilities. They may be honed from innate talent, or developed from a particular strength. When practiced over time, an individual may develop expertise in a particular skill, talent or ability. The next section explores the research on the differences between the way novice learners and experts approach tasks.

Expertise and Novice Learners

The pattern of the strength of a good reader's metacognitive skills follows what has been written about expert/novice learners in general. In examining the components of experts:

1. Experts do not just have more knowledge than beginners, nor were they just born with exceptional talent. Experts practiced their skills a lot.
2. Experts know what to notice in a problem.
3. Experts have very organized knowledge.
4. Experts' knowledge is deeply interconnected.
5. Experts have many strategies, which they know exactly when to use.
6. Experts have practiced their basic skills so much that they are automatic.
7. Experts are very aware of their own thinking—they know when they don't know.
8. People become expert by observing experts, learning strategies and facts for specific subjects, solving problems, getting feedback, and talking about why things are the way they are (Cromley, 2000, p. 130).

The parallels between experts and fluent readers are documented in Table 7.

Good readers, therefore, function like experts in any subject would and readily utilize the strategies at their disposal. Experts are able to think effectively about problems in their area of expertise. They have "acquired extensive knowledge that affects what they notice and how they organize, represent, and interpret information in their environment" (Bransford et al., 2000, p. 31).

Table 7

Parallels Between Expert Theory and Fluent Readers

Expert Theory	Fluent Readers
Experts do not just have more knowledge than beginners, nor were they just born with exceptional talent. Experts practiced their skills a lot.	Good readers have practiced reading to gain their fluency.
Experts know what to notice in a problem	Fluent readers know how to get beyond sounding out words and look for ideas and meaning making of passages.
Experts have very organized knowledge.	Fluent readers generally employ strategies, such as examining heading, pictures and other pre-reading strategies to overview prior to reading, and may review at the end. They will also check understanding along the way.
Experts' knowledge is deeply interconnected.	Fluent readers bring other knowledge to the passages, and can discuss ideas that are related to their reading.
Experts have many strategies, which they know exactly when to use.	Fluent readers employ a variety of metacognitive strategies.
Experts have practiced their basic skills so much that they are automatic.	Fluent readers do not need to think about the mechanics of reading.
Experts are very aware of their own thinking—they know when they don't know.	Fluent readers generally employ strategies, realizing when something has not been understood, will return and re-read something for understanding.
People become expert by observing experts, learning strategies and facts for specific subjects, solving problems, getting feedback, and talking about why things are the way they are.	Reading is learned; taught, as well as caught. Reading families tend to foster reading children and non-reading families tend to perpetuate the cycle of low-literacy as well.

Subtracting the lowest level readers from the statistics from the National Adult Literacy Survey, approximately 86% of the adults in the US have gained sufficient reading skills that the process has become automatic; in essence, they have become skilled at it. They no longer need to decode each word individually, but have practiced sufficiently to the point of automaticity. For whatever reason, low-literacy learners have never made this transition. However, these low-literacy learners appear to possess individual strengths and abilities in a variety of other areas. If

the work of Howard Gardner (1983, 1993, 2003) and his thinking on multiple intelligences is considered, it may be that the low-literacy learner has a decided weakness in the areas impacted by the linguistic intelligence and dominance in one of the other areas. Potentially, this area of strength or expertise can be leveraged in helping the learner to read as suggested by the literature on strengths-based perspective previously mentioned. Gardner (1983) addresses the assisted cross-learning that occurs between the different intelligences such as the musical intelligence strengthening the learning of verbal tasks and verbal/linguistic intelligences assisting with interpersonal tasks.

In Gardner's framework, tendencies toward a particular area of intelligence are revealed in early childhood. This area of strength continues to grow and develop and may eventually become an area of expertise for the individual in later life. Not all skills are built on natural tendencies, however, and many require additional effort to achieve. For the low-literacy learner, reading is an example of this.

For the purposes of this study, strength and expertise will be considered together. Expertise is viewed in the broadest, generic sense as it is used in everyday conversation rather than in the classical, purist sense as it is considered in the literature of educational psychology. An individual may possess an area of natural ability or strength, and through life skill, learning or practice, have gained expertise in it. In this study, expertise is something viewed on a continuum with novice at one end and mastery at the other. When a person has crossed a particular threshold to be considered skilled, practiced or highly experienced in a particular skill or area, he or she is considered to have expertise in it. In most research on expertise, the subject population differs from low-literacy learners. The cognitive attributes of the "expert" low-

literacy learner remains the same as those subjects studied for their expertise, especially in

contrast with those of novices, hence there is applicability of the concepts contained in the

research. Much of the later research on expertise is more generalized.

Expertise is difficult to measure when it exists in areas like as teaching or business (P. E.

Ross, 2006), but it can be quantified in skill-based games like chess, where chess masters are

timed in their performance and moves can be analyzed statistically.

The earliest studies on expertise (DeGroot, 1965) reveal that experts and novices notice

the same stimulus differently based on the knowledge that the individual brings to the situation.

Experts bring different schemas to the situation, and focus on principles and patterns, whereas

beginners only examine surface attributes (Bransford et al., 2000). Experts have learned to chunk

information (P. E. Ross, 2006), learning to see groups of information segments as one whole. In

the reading process, individuals progress from sounding out individual words to automatic

recognition of words. They can also compensate for misspelled words by inferring from the

context.

Experts know how to filter certain attributes to select the proper solution to a problem.

They have developed a sense of fluency in their subject. "Fluency is important because effortless

processing places fewer demands on conscious attention" (Bransford et al., 2000, p. 44). The

concept of fluency in reading reinforces the level of expertise a fluent reader brings to a passage,

allowing for more conscious attention to be devoted to comprehension. Low-literate adults have

not gained this fluency in reading and must devote their resources to decoding.

Experts practice what they do, attempting challenges beyond their current level of ability.

According to P.E. Ross (2006), it takes ten years to develop expertise in a given category. It is

also motivation, more than innate ability, that develops expertise. Success increases motivation, causing the expert to continue to practice.

Certainly adult low-literacy readers have developed some compensatory skill sets because of their lack of reading, and these require metacognitive abilities. Some may even be areas where these learners would be considered experts. In these areas of expertise the learners would have developed problem-solving skills that allow their success in the given area. Potentially, these skills and metacognitive abilities can be sought out and leveraged in the reading process as with other areas (Cowger, 1994). If this expertise can be adapted to the reading environment, it may assist in the transfer process of learning to read.

Bransford et al. (2000) discuss adaptive expertise, defining some experts not only as fluent, but flexible:

> Adaptive experts are able to approach new situations flexibly and to learn throughout their lifetimes. They not only use what they have learned, they are metacognitive and continually question their current levels of expertise and attempt to move beyond them. They don't simply attempt to do the same things more efficiently: they attempt to do things better. (p. 48)

If it is possible to leverage the strength/expertise in the NSE learners' particular area to reading, it may break through the reading barrier.

Schraw (2001) believes that metacognitive skills are domain general, while cognitive skills are domain specific, "encapsulated within subject areas" (p. 6). Initially, metacognitive knowledge is task specific, but as knowledge and metacognitive skills develop in a variety of areas, learners create generalizable metacognitive knowledge. Schraw also states that metacognitive knowledge and regulation improves as expertise within a particular domain

improves, and as they advance, experts learn to use these skills in a more flexible manner across a variety of areas.

Transfer of Learning

There are implications for the low-literacy learner concerning the potential of transferring the learning they have used to gain the skill set in the area of expertise/strength area and reading. Transfer is defined as the ability to use learning in a novel context. There are several considerations connected with transfer of learning. Transfer may be impacted negatively or positively by previous learning. Someone with significant knowledge about the care of rabbits will easily adapt to caring for a new puppy. This is an example of positive transfer. Positive transfer helps learners function effectively in situations and solve problems in settings where they have not acquired knowledge, but can transfer the concepts that have been learned in other settings. Negative transfer occurs when prior knowledge causes the learner to make poor assumptions, such as the young child who learns that the four-legged animal at home is a doggie, and generalizes every four-legged animal to be a doggie for a while. Negative transfer is common and generally only causes issues in the early stages of learning (Perkins & Salomon, 1992) since learners correct these errors as learning progresses. It is anticipated that there is a potential for positive transfer of learning between the area of expertise or strength and reading for the low-literacy learner.

There are two other dimensions of transfer of learning: near and far. Near transfer is the connection made when the contexts are similar, such as measuring flour then measuring sugar. The tasks are similar so there is very little change required to adapt to the new task. Far transfer is more complex, because it involves more remote connections and dissimilar contexts. In

situational e-learning experiences, there are often expectations of far transfer to the workplace when learners are placed in an online conceptual simulation to practice theoretical skills and later expected to use them on the job. Far transfer includes the ability to solve novel problems sharing a common structure with the initial knowledge acquired (Mestre, 2002). It often involves a transformation requiring analogy and higher order cognitive skills (Subedi, 2004). Potentially, the metacognitive skills uncovered in the low-literacy learners' areas of strength/expertise may have far transfer applicability to their developmental reading skills.

Factors Influencing Transfer

There are a variety of factors which influence the transfer of learning. Transfer of learning depends on the degree of mastery of the original subject and the degree to which people learn with understanding rather than memorizing facts or following specified procedures. Learners must understand from a conceptual view, and abstract critical attributes from the situation (Perkins & Salomon, 1992). Transfer can be enhanced by "helping students see potential transfer implications of what they are learning" (Bransford et al., 2000, p. 60). Context can influence the potential for transference, so teachers must provide a variety of settings to use the newly learned skill for transfer to occur (Mestre, 2002). It has been well documented that adults learn best when new information can be connected to existing information. While transfer generally refers to similar subjects, such as the learning of fractions in the classroom transferring to the kitchen for concocting recipes, is it possible that the adult learner's area of expertise and the way he or she used the knowledge gained there can have transference to reading? According to Bransford and his colleagues, "Metacognitive approaches to instruction have been shown to increase the degree to which students will transfer to new situations without the need for explicit

prompting" (p. 67). This is also supported by Perkins and Salomon (1992) who discuss that active self-monitoring, mindfulness and metacognitive reflection tend to promote transfer of skills. Transfer is enhanced when new material is studied using previously learned material as a metaphor, analogy or model (Perkins & Salomon, 1992). For example, the solar system may be used as a conceptual model of an atom. Things known about the earlier domain may be transferred to the new domain.

There are opportunities to be deliberate about promoting transference. Some transfer occurs through repetitive practice in varied contexts. Salmon and Perkins (1989) and Perkins and Salomon (1992) write about this as low-road transfer. Educators provide a variety of experiences for the learner, allowing skill practice in numerous settings, and the transferring of learning occurs. In low-road transfer, the process, concept, or skill becomes automatic once the activity receives extended practice. In contrast, high road transfer involves the mindful abstracting of knowledge from a context. This type of thinking often occurs in the creative process and is enhanced by the application of lateral thinking skills (de Bono, 1973).

Within high-road transfer, there is forward- and backward-reaching transfer. Far transfer occurs as the initial concept is taught and connections to unrelated information are made. In forward-reaching transfer, seeds of ideas are planted and concepts are formed as the learner synthesizes new information. In backward-reaching high-road transfer, the learner searches past experiences for possible connections.

The key difference between low-road and high-road transfer is the process of mindful abstraction, which allows for a higher level of processing and conceptualization, and therefore more transfer opportunities. The concepts become decontextualized, allowing for more

applicability. Salmon and Perkins (1989) identify this as "metacognitively guided" (p. 162). Potentially, seeking out the principles and the metacognitive strategies utilized by the low-literacy learners, then abstracting them will lead to discovery and transfer of effective strategies to assist in the reading process.

One question in The National Science Foundation report on Transfer of Learning (Mestre, 2002) is particularly appropriate for the context of this work. Among the questions in the research agenda, one asks, "What are the cues and strategies that can be used to trigger appropriate knowledge to be applied in a particular situation" (p. 9)? This question recognizes that the learner often has the relevant knowledge in a transfer situation but fails to make use of that knowledge. Is it possible that the knowledge lies in the life experiences of the strength/expertise areas of these learners? Potentially, adult literacy teachers can scaffold the learning of these beginning readers to build on the metacognitive schemas used in the learners' area of strength. This study sought to examine if there were any connections that might be leveraged.

<center>Summary</center>

In summary, both metacognition and reading are developmental processes that mature with experience. Both make gains with age, although age is not a factor in reading skill improvement. Age provides more exposure to print, increasing adults' orthographic awareness. Metacognitive processes control the skills necessary for reading comprehension. In beginning and poor readers, there is limited use of comprehension monitoring because of the intensive resource drain of the decoding process, consequently the reader may not be aware of misinformation within a passage and misunderstanding of the text being read. When a reader

gains fluency and expertise in reading, there is more capacity for comprehension, and the reader

begins to function like an expert would in any subject. Metacognitive skills have the potential to

be generalizable and consequently, may be able to have influence over the reading processes of

the ABE students in this study.

CHAPTER 3. METHODOLOGY

This study used a phenomenological approach to interview thirty low-literacy adults. The data was analyzed, seeking the subjects' metacognitive processes and perceptions of the reading process, then contrasted with their metacognitive knowledge of a self-defined area of expertise or strength.

Rationale for Method Choice

Phenomenology is used to explore a phenomenon through the eyes of the studied participants. Its intention is to recreate the lived-experience through analysis and interpretation; to capture the essence of the experience and gain understanding of the perspective of the participant. Phenomenology seeks to illuminate the specifics of the phenomenon under investigation (Lester, 1999; Priest, 2002). Phenomenology also seeks to define and describe the understanding of the individual participants (Giorgi, 1997).

This research sought to uncover the metacognitive understanding of the individual participants around the reading process, looking for commonalities among the group of participants. It sought to explore the rationale behind some of the delays that occur in the reading development of some low-literate native English-speaking adults. In seeking the themes common in multiple readers' perceptions, there was the potential of uncovering key issues barring these learners from the reading process.

The issue under investigation was examined from an individual perspective, then analyzed for commonalities among multiple subjects. Phenomenology looks for structures of meanings that are general or typical for groups of people by listening to several accounts of

personal experience then analyzing for generalizable themes (Lester, 1999). The key is to enter

the participant's world-view to understand the meaning from the participant's perspective.

A study like this one falls under the category of qualitative research. Qualitative research

is an inductive process, perceptually taking pieces and combining them into wholes to produce

meaning. This forms gestalts, and data gels into new concepts and theories. It may be the process

of looking at something old in a new way, changing sedimented thinking (J. Ross, 1999) but it

may also be the exploration of something completely new and previously unexplored. The

comparison of the metacognitive strategies of expert abilities/strengths and specific areas of

weakness, in this case, reading, within individuals is a research topic that has not been previously

investigated. Research exists on the individual topics of metacognition in reading, as well as

some limited information on low-literacy metacognition studies in adults and metacognition in

expertise, but the two have not been combined before this study.

In attempting to understand the learner's understanding, the researcher must spend time

interviewing and inquiring into processes and developing insights to be able to recreate the

participants' knowledge. Phenomenology is especially well suited for this low-literacy

population because it involves conversations, so the lack of reading skills has no impact on data

collection.

Based on metacognitive research analyzed in relation to developmental reading,

phenomenology then, is an apt way to answer the five questions of this study:

1. How do NSE adult beginning readers define the reading process?

2. What metacognitive processes do NSE adult beginning readers use during

   decoding?

3. What are the metacognitive processes used by NSE adult beginning readers during the meaning-making of reading text?

4. What are some of the metacognitive processes used by NSE adult beginning readers during complex, non-reading tasks in which the subject perceives him or herself to have strength, talent or expertise?

5. Are there any relationships between the metacognitive processes of the self-defined expert/strength area and the limited ones of reading?

Research Design

Interviews

The researcher conducted one-on-one interviews with the subjects, then analyzed the resulting data. Participants were 30 adults who are native English speakers and who read at a grade equivalent of third grade or less. The initial goal was to work with low-literacy adult learners working at a second-grade or lower grade level equivalent in reading. Because of the limitations of the reading tests and available population, this grade level was expanded to include those reading at a third grade level.

The interview consisted of a series of conversational questions about reading such as, "What is reading?" and "Why do people read?" to elicit participants' concepts about reading. Questions like "What are you thinking about when you are reading?" and "What do you do when you come across a word you don't know?" were intended to reveal core metacognitive processes around reading. The researcher hoped to hear about word attack strategies, if used, and how the participant constructs meaning from sentences, translating the text into ideas. It was entirely

feasible, based on the literature review, that this type of thinking does not occur in the participants.

The interview included a series of questions designed to elicit information regarding the varying strategies used by the subject in an area of self-selected personal strength or expertise. Questions in this area included, "Tell me about something you do really well; something you might even consider yourself to be an expert in," and "How do you figure out a problem when you are doing (subject of expertise)?" The full set of questions with the intended areas of focus is documented in Appendix B.

Assumptions

The underlying assumption was that these individuals would be able to verbalize their understanding and strategies and the interview questions would elicit them. Based on metacognitive research (Garner, 1981, 1988; Hall et al., 2000; Jacobs & Paris, 1987; Loxterman et al., 1994), it was expected that this would reveal their thinking about the reading process as it does with children and normally reading adults. It was also anticipated that there would be some sophisticated coping strategies in place that would be uncovered and described as the subjects explained the processes of expertise because they have developed ways of survival in a highly information-driven society without the benefit of reading.

Sampling Design: Selection Criteria and Setting

Participants selected for a phenomenological research project are individuals with experience of the phenomenon and who are able to articulate it, which may only be a subset of the population. Participants for this research were selected using a convenience sample found through networking with literacy agencies in southern New England in the private and public

sectors and included inmates learning to read within the walls of a state correctional facility. The prison population adds complexity to the sample, however, there is a large population of incarcerated NSE low-literacy readers which added to the richness of the dynamics. The inmates represented 50% of the subject group. As the results were analyzed, clear lines of differences between the inmate and non-inmate population were sought after, but only one was uncovered and it is represented in the results. It was anticipated that the metacognitive processes of the inmates would not differ between the sixteen inmates and fourteen non-inmates in the population sample.

Subjects were both male (24) and female (4), and were over eighteen years old with no maximum age cap. Age was not used as a discriminating factor. The only stipulation was that the interviewees were adults. All live in southern New England. Participants were native English speaking adults reading at a grade equivalent level of third grade or lower as identified by the referring literacy provider. They were all interviewed at the literacy provider's location.

Measures

Phenomenology attempts to describe the world as experienced by the participants to discover the common meanings underlying empirical variations of a given phenomenon. To do this, the researcher must set aside presuppositions to see the phenomenon as it is, then investigate, understand, and describe the meaning of the lived-experiences. In phenomenological research, the researcher focuses on structures of meanings that are typical or general for groups of people by listening to accounts of personal experience. The key is to enter the participant's world-view to understand the meaning from the participant's perspective. The researcher sees the

person as part-and-parcel with the environment. "I shape the world and the world shapes me" (Decker, 1998).

For this study, the researcher's role was one of interviewer, listener, observer, and data analyst. The analysis is the interplay between researcher and data (Strauss & Corbin, 1998). The researcher gained credibility with the participants through an introduction from the referring literacy provider and developed rapport with the students through initial conversation prior to the actual interview. The interviewer's role remained constant for each interview, adapting the initial conversation based on the discussions with the participant. Once the interview questions began, they proceeded in the predefined order.

Interview Questions

The interview questions were developed by the researcher and were tested with two students matching the profile using the same conditions as planned for the actual research before actual use with the sample. The pilot met expectations and there was no need for modification of the wording of the questions based on the answers given in the interviews and verification of understanding by the preliminary interviewees.

<center>Data Collection Procedures</center>

Data gathering consisted of in-depth, unstructured interviews using the questions found in Appendix A. Interviews were conducted in a one-on-one interview setting in a relatively quiet location at the provider's facility. These discussions were conversational with the heart of the interview being the understanding of the other person's perceptions about the reading process and area of strength/expertise. Interviews were intended to have minimum structure but maximum depth (Lester, 1999). During the discussions, empathy was critical for gaining depth of

information. As the participant told his/her story, the descriptions were explored, illuminated and probed (Wimpenny & Gass, 2000) by the researcher.

Data was collected through an individual interview between the researcher and the participants. Initially, the scripted questions were used, but because of the nature of phenomenology, the researcher periodically needed to probe for additional information and explanations from the participants. All interviews were tape-recorded with the interviewee's permission, and documented through the researcher's note taking. No interviewee denied permission to record, so there was no need to replace any subject with an alternate.

The ethical issues considered in this study were primarily those of anonymity. To safeguard participants, individual subjects were labeled as S1-14 for the private sector interviewees and P1-16 for the inmate population. Data from each interview was coded in the transcripts to maintain the anonymity of the subjects. These participants have extremely limited reading capabilities, and even though they cannot read the information themselves, it would be a violation of their privacy to publish information about them that could be directly tied back to them. All participants signed a waiver (written with a low level vocabulary) acknowledging their participation, ability to drop out of the program at any time and agreement as to the protection of their information. In addition, participants were protected through a review and approval of the process and questions by the IRB of Capella University and the IRB at the correctional facility. Tapes and their transcripts were kept in a locked file cabinet in the researcher's office and will be destroyed after seven years. Subjects have been informed of these details and given an opportunity to receive a copy of the final report if so desired.

Data Analysis Procedures

The goal of data analysis in this type of research is to distill the information to arrive at its essence. There are five steps used to get to the essence of the phenomenon (Lester, 1999). First, the researcher reviewed all of the data to get a sense of the whole. Next, the researcher worked to discriminate meaning units. Next, there was a synthesis of transformed meaning into a consistent statement of the structure of the experience. Each of the reduced concepts was sorted into related groups in an attempt to find patterns. Lastly, there was a final synthesis of the data to explain the overall description of the phenomenon.

Data analysis occurred shortly after each meeting in order to accurately capture observations and perceptions close to the timing of the interview. The data was transcribed from the tapes into a word processing program in a wide margin format, and then the researcher reviewed the transcripts, making notes and observations in the margins. The interview transcripts were compared with one another, looking for similarities. Information was coded in Microsoft Word and NVivo, using content analysis and an auto-coding methodology that finds repeated phrases and other emerging ideational commonalities. Data clusters were sorted, identified, and labeled. Once themes and similar thought patterns among the participants were identified, the transcripts were reviewed again, looking for additional connections that may have been overlooked. The common themes, phrases, and identified patterns were documented in a summative qualitative description of the findings, synthesizing the information uncovered regarding the phenomenon. Additionally, a word count/frequency analysis was performed within the data, looking for frequently used words to validate concepts that were uncovered in the synthesized information.

An independent reviewer was used to provide inter-rater reliability to establish accuracy of the categorization of the data. The independent reviewer was an adult educator with seven years experience in data analysis. The independent reviewer categorized the results from three questions without access to the researcher's breakdown into broad categories, then the two assessments were compared. Since there was 80% or better agreement, the inter-rater reliability validates the categorization. This ensured the reliability of the categorization of the data.

The goal of the research was to establish multiple commonalities among the thirty interviewees in the patterns of metacognitive strategies in the reading process and in the expert area processes. The patterns are substantiated by the wording in the interviews, as well as the inter-rater reliability validation and are triangulated by the research data.

Limitations of Methodology and Strategies for Minimizing Impact

There are several limitations to this methodology. First, the participants may not be aware of or able to explain their strategies (Gambrell & Heathington, 1981). If the students had difficulty with the concepts the researcher was prepared with several examples and techniques. The first is modeling. The researcher was prepared to demonstrate metacognition with a common example of selecting which key to use to unlock one's front door. This is an automatic process for most people, even though it requires a number of subconscious decisions. First, the set of keys must be located. Second, the correct key must be selected. How is the correct key decided upon: shape, size, color? Which way does it go in the lock: up or down? Which direction is it turned: left or right? Must the handle be turned simultaneously with the key to open the door? Several of these decisions are metacognitively directed and done below the conscious level.

Another way to elicit metacognitive strategies is to ask the individual to teach someone else the targeted skill. The types of behaviors demonstrated will often reveal the strategies used. During the interviews, the participants were asked what they would do to teach someone who doesn't know how to read at all and if necessary, could have been role-played with the participant instructing the interviewer. This revealed some key insights.

A final method for eliciting metacognitive strategies is the use of simultaneous think-aloud reading. During this process, the participant is given a passage to read and asked to verbalize everything they are thinking about as they are performing the task. This could only have been used as a last resort with the sample population because of the unverified reading level and large disparity between a primer and pre-primer level text. It was expected that the questioning techniques and explanation as described below would provide sufficient information so that this would not be necessary, but it could not be eliminated until there had been some work with the target population. There was no need to utilize any of these techniques in the interview process.

Phenomenology allows for expansion for clarity of ideas. As needed, the researcher used multiple variations of the questions in an attempt to explain the desired outcome to the participant in an attempt to probe for information and obtain clarity. For example, for the question, "Tell me about something you do really well, perhaps you would consider yourself an expert in this"; it could have been additionally probed with "What do other people say you do really well?" or "What kind of things might come up that people would go to you first for help with?" These types of variations were used in the pilot of the interview questions. Whenever this strategy was employed, the researcher's comments were documented in the transcript.

A second limitation of the study was that the researcher did not administer a reading test to validate the reading level of the participants. The researcher was relying on the literacy center/educational site's test results regarding the reading ability of the participant because testing the interviewees could potentially have set up a barrier and cause mistrust of the researcher. This limitation was minimized by asking for the reading test scores of the recommended participant at the receipt of their name and contact information. Each center was able to provide a reading level for each participant that was generated from a nationally validated, reliable reading test.

Additionally, Cromley (2005) mentions several more limitations of interview studies. First, people may give the answer they believe the researcher wants to hear (social desirability bias) and secondly, in metacognitive study interviews, people need to remember what they usually do (retrospective/recall bias) during the process under investigation. Like others, Cromley also comments on the potential difficulty of eliciting metacognitive insights into the reading processes from low-literacy learners. To avoid the social desirability bias, when an answer to a question appeared to be a standard answer, or if it is routinely rattled off, the researcher asked, "What do you mean by that?" to elicit expansion from the interviewee. In an attempt to override the retrospective/recall bias, the examiner was prepared to ask the interviewee to demonstrate the process and model the thinking through a think aloud technique, where the subject is asked to verbalize thoughts as they occur during the process. This was not necessary within this interview set. Regarding the potential obstacle of the limitation of description of the metacognitive processing during reading, the researcher probed into the

reading process after the description of the expert process to determine if any additional insights might be uncovered.

Summary

In summary, this study was conducted using phenomenological analysis of the data provided in thirty interviews of native English speaking adults learning to read as they discussed their thinking around reading processes and an area of self-selected expertise. The research sought to uncover patterns of the metacognitive processes used by these beginning readers during reading and in an area of expertise. Interviews were conversational, and subjects' right to privacy was protected through IRB reviews and notification of confidentiality forms.

CHAPTER 4. RESULTS

In this chapter the results of the data analyses and procedures outlined in Chapter Three are presented and discussed. This study was conducted to answer the following research questions:

1. How do NSE adult beginning readers define the reading process?

2. What metacognitive processes do NSE adult beginning readers use during decoding?

3. What are the metacognitive processes used by NSE adult beginning readers during the meaning-making of reading text?

4. What are some of the metacognitive processes used by NSE adult beginning readers during complex, non-reading tasks in which the subject perceives him or herself to have strength, talent or expertise?

5. Are there any relationships between the metacognitive processes of the self-defined expert/strength area and the limited ones of reading?

The chapter is organized into eight sections. The initial material reiterates the process, including the interviews and coding details, then there are five sections; one for each research question. The final section is a summary of the findings.

Interviews

The interviews for the study were conducted at three literacy providers located in New England: a small, privately run center in Rhode Island, a ProLiteracy affiliate in Connecticut, and the educational programs at several security levels (minimum, medium and maximum) at a state

correctional institution. All interviewees were enrolled in the reading program at the facility. Interviewees were selected at the recommendation of the program directors based on the criteria of being native speakers of English, and scoring at a third grade or lower equivalent reading level. Interviews were conducted in a quiet room in a one-to-one setting with only the researcher and the interviewee present. Interview questions were read verbatim from the list by the researcher, who served as the only interviewer. The researcher visited once with each participant. With the exception of one interviewee, all participants were unknown to the researcher.

All interviews were conducted in October 2005 through March 2006. The process was explained to interviewees prior to the interview by their program director, as well as the researcher at the time of the interview. After agreeing to participate, each participant read and signed the release form with the researcher. Most often the researcher read the consent form aloud while the student looked on. Students were all amenable about participating in the program. Each interview lasted approximately thirty to forty-five minutes.

All interviews were taped, and each tape was transcribed by the researcher to ensure reliable rendering of the data. The tapes were replayed after transcription to ensure accurate documentation.

Participants

A total of 30 participants were interviewed: one from the Rhode Island center, thirteen from the Connecticut center and sixteen from the correctional institution. Two candidates were eliminated during the interview process when it was discovered that the students were not native English speakers. There were four women and twenty-four men included in the sample. As a note, the male population dominates because the correctional institution was a male facility.

Three interviews were not transcribed because of problems with the tape recordings, but their data was included based on the notes taken by the researcher during the interview.

As the data analysis began, significant gaps in concepts of the beginning reader responses began to emerge. To provide a point of reference on the questions and allow for comparison between accomplished adult readers and beginning adult readers, the researcher presented the questionnaire used for the interviews in a written, electronic form via e-mail to ten adults in a convenience sample in January 2006. This sample consisted of professional trainers in a corporate environment that regularly use reading as part of their jobs. They were instructed not to spend time pondering their answers to the interview questions but to record the first thoughts that came to them as would occur in an interview setting. Four of the ten elected to return the survey. Their responses were analyzed for the categories found in the original interviews and examined for the anticipated responses that were missing in the beginning reader pool of information. Their information was only used as a point of comparison to validate the researcher's thoughts on the differences between the ways a "normal" reader would answer the questions. It is not reflective of the entire "normal reader" population, but does indicate the validity of the questions seeking specific, anticipated answers that were not present in the new reader responses.

Reading Scores. Initially, a condition of participating in the study was that a participant needed to have a reading level score with a grade equivalent of second grade or lower. It was difficult to locate sufficient participants at a second grade or lower level, so the pool was expanded to include several third grade level readers. As noted below, the testing used in one location provided fuzzy leveling and is of questionable accuracy at these primary levels because of the general nature of the assessment.

Reading scores were provided to the researcher based on testing done at the individual facilities. Scores ranged from a grade equivalent of 0.0 (complete non-reader) to 3.8. The formatting of the reading scores follows standard grade equivalency scoring with the initial number representing the school year and the number following the decimal point showing the month of that year. Therefore, a grade equivalent score of 2.3 would represent an equivalent reading level of someone in the second month of second grade. Scores were calculated using the Test of Adult Basic Education (TABE) at the correctional facility, and from the Diagnostic Assessment of Reading (DAR) for the other two centers.

The DAR is a criterion-referenced diagnostic assessment of oral reading fluency, silent reading comprehension, word recognition, word meaning, spelling, and word analysis. All subtests were in a similar range for all students, with the exception of word meaning, which tended to be higher. The word meaning test is given orally, and students are asked to define the meanings of words. This is not a reading-specific task, but rather a measure of language fluency so it was not considered as a variable. Generally word recognition is a good predictor of beginning reading skills (Bertleson, 1987), so it was selected as the indicating score for qualification for the subject pool and is the score represented in the documentation in Table 8.

The DAR, as a reading-specific diagnostic test, has a much more discrete scoring mechanism than the TABE, which is a global assessment of general skills, including vocabulary, reading, language, language mechanics, mathematics, and spelling. The TABE is generally used as a placement vehicle rather than a diagnostic test (Strucker, 1997; Van Duzer & Berdan, 1999). It is likely that the DAR a better reflection of the student skill.

Table 8 indicates the individual scores, identifying grade equivalent reading level based on the TABE and the DAR. Students from the private programs are coded S1-14, and students from the correctional program P1-16. Scores are presented as grade equivalents.

Table 8
Interviewee Reading Scores

Private Programs		Prison Program	
Student	GE Score (DAR)	Student	GE Score (TABE)
S1	1.2	P1	3.3
S2	1.2	P2	0
S3	1.2	P3	0
S4	1.1	P4	1.8
S5	Bi-lingual, excluded	P5	1.8
S6	Bi-lingual, excluded	P6	2.1
S7	3.0	P7	1.8
S8	1.1	P8	2.9
S9	1.1	P9	2.3
S10	1.2	P10	0
S11	1.2	P11	3.8
S12	1.0	P12	2.5
S13	1.2	P13	2.9
S14	0.1	P14	1.8
		P15	3.3
		P16	2.3

The data in this table indicate that the reading level in the private student population ranged from GE 0.1-3.0 and GE 0-3.8 in the prison population. All students were considered to be at a beginning reading level by their program directors and teachers who made recommendations of the participants to their program directors.

Coding the Data

The data were analyzed using a variety of methods. The transcribed interviews were reviewed for initial themes, then the interview responses were collated by question to provide documentation of the answers to the individual questions in one location for easier comparison of responses. Initially, an informal conceptual model was utilized to ascertain generalized categories and cluster themes. These themes were triangulated through the review of an adult educator with seven years experience in adult training and development. This reviewer uncovered similar findings with 80% conceptual agreement to the researcher. The researcher adapted the titles for the initial categories by combining the reviewer's and the researcher's names for topics.

The process was repeated using a more formalized analysis to generate a codebook. Once again, a conceptual item analysis was performed, but at a more discrete level. Microanalysis (Strauss & Corbin, 1998) of each interview question was undertaken to derive specific codable concepts. Coding allows for the data to be scrutinized as it assigns indicators to words that might occur in multiple responses. The data were examined from an inductive as well as deductive perspective (Boyatzis, 1998; LeCompte & Schensul, 1999) in order to provide thorough item analysis. NVivo software was used to document the process of code generation.

Once the codes were assigned, the researcher examined the codes for themes and relationships. Themes were identified within each section, and the data was reviewed multiple times looking for use of the concepts in the interview transcripts for each question. The data was explored for differences within the populations using the tools within the NVivo software. It was queried for recurring themes to ensure nothing had been overlooked in the review. This querying

process uncovered several areas of repetitive themes that crossed over between the interview questions.

Finally, a word frequency analysis was undertaken for each interview question as recommended by Krathwohl (2004) using the Georgetown Linguistics Word Frequency Index (http://www.georgetown.edu/faculty/ballc/webtools/web_freqs.html) to review for any missed ideas or concepts that might be represented in repetitious words. The frequency list for each question was exported into Microsoft Excel and reviewed against the frequency list of spoken English found in Word Frequencies in Written and Spoken English (Leech, Rayson, & Wilson, 2001). This allowed the researcher to validate and remove terms that would be naturally occurring in conversations. Significant words beyond those common to general conversations were noted and compared with the data found in the coding analysis to further triangulate the data. If an item was not included in the initial coding process, the data was queried and analyzed to determine if there was significance of the term. When terms were absent or low ranking, a brief comparison was made with the analysis of the questions from the normal readers to validate the hypothesis that they were indeed anticipated terms to the question that would appear in normal readers as opposed to the beginning readers.

The next section explains the research questions and explores the data as uncovered in the analysis.

Answering the Questions

Interview Questions and Research Questions

The results from the sixteen interview questions are synthesized in the following sections in answer to the research questions. Table 9 maps each research question to the interview

question(s) designed to answer it. The order in which the question was asked is indicated by the

parenthetical number following the question.

Table 9

Research Questions and Related Interview Questions

Research Question	Related Interview Question (Question Number)
1. How do NSE adult beginning readers define the reading process?	What is reading? (5)
	Why do people read? (6)
	Why are you learning to read? (7)
	How does someone learn to read? (8)
	How would you teach someone how to read if you met someone who couldn't read any words at all? (15)
2. What metacognitive processes do NSE adult beginning readers use during decoding?	How do you know what the words are? (9)
	What do you do when you find a word that you don't know? (10)
3. What are the metacognitive processes used by NSE adult beginning readers during the meaning-making of reading text?	What do you do/think after you are done reading a passage? (11)
	How do you figure out what a story or passage is about? (12)
	How do you know if you've understood what you have read? (13)
	What are you thinking about when you are reading? (14)
4. What are some of the metacognitive processes used by NSE adult beginning readers during complex, non-reading tasks in which the subject perceives him or herself to have strength, talent or expertise?	Tell me about something you do really well; a strength you have; perhaps you might even consider yourself an expert in this. (1)
	How did you learn how to do _____? (2)
	What are you thinking about when you do this? (3)
	How do you figure out a problem when you are doing _____? (4)
5. Are there any relationships between the metacognitive processes of the self-defined expert/strength area and the limited ones of reading?	How do you know how to do things that require reading if you can't read the signs or directions? (16)

Documenting the Information

Each section begins with a summary of the researcher's observations, a table documenting the coding results, then includes material that quotes directly from the interviews. Quotes from the participants are written as they were spoken without correction to grammar. The entire answer is included unless it is preceded or followed by an ellipsis (…) as many of the answers were fragments, rather than whole sentences. The speaker is identified using the codes from Table 8. S1-14 are the identifiers for the interviewees from the private sector and P1-16 for the incarcerated individuals. When the interviewer made comments during the response or asked additional questions, they are indicated in brackets [ ] within the text and identified as such. If the word was uncertain in the transcription process, it is followed by a question mark enclosed in parentheses (?). All observations are about the beginning readers unless specifically documented as being about the experienced readers.

<div align="center">Question One: Perceptions of the Reading Process</div>

Research Question 1 asks, "How do NSE adult beginning readers define the reading process?" Five of the sixteen questions from the interview dealt with concepts and processes of reading as listed in Table 10. The entire data set was examined beyond these five questions for additional insights as concepts were revealed in additional discussions.

Table 10
Survey Questions Answering Research Question 1

Survey Question	Interview Question Number
What is reading?	5
Why do people read?	6
Why are you learning to read?	7
How does someone learn to read?	8
How would you teach someone how to read if you met someone who couldn't read any words at all?	15

Concepts of Reading

    The beginning reader interviewees in this study see reading as something done with books and stories, as a subject, as something that can be used to gain information and provide advancement. It is also something that evoked feelings when it was discussed. There is a contrast as to his or her perception of what reading is, why s/he is learning to read and why other people read. There is considerable contrast between the beginning readers and the experienced readers in what the reading process is. Experienced readers spoke of reading as looking at information and generating meaning from it. Meaning is not mentioned in the beginning readers' general discussions of reading, although it appears in discussing their understanding of a passage.

    Table 11 identifies the dominant themes presented in the interviews about how the NSE beginning readers define reading and the reading process. Examples and elaboration of the concepts follow.

Table 11

Concepts of the Reading Process

Concept described	Number of references
Source of advancement	31
Source of information	9
Reading as something with books, information, stories	8
Skill related/functional	7
Vocabulary/word related	6
Seeing and knowing	2
Frustration/feeling about ability mentioned	15

In responding to the question "What is reading?" eight students included something about information, stories or books. For example, "To me, it's a bit of, a lot of information to where; to learn. It's stuff where it's like telling you how to do things. How to solve things. Or it also tells you like instructions." (P15); "Source of information" (P13); and "reading…read books" (P5).

Two students mentioned the concept of reading as seeing and knowing. It is possible that this knowing is indicative of meaning, but it may also appear as recognition of the words. For example, "Reading is seeing something and you know what it says. That's what reading is."(S7) Also:

> Reading you gotta read books and stuff. And I cannot. I read like if I get help like with the teacher, she teach me. Like she get a book Maryann or Judy get a book and they sit with me and I look at a picture in the book and somewhere I can say, "I want…I want to go" or stuff like that. I got my book, my other book. My other folder. I got stuff what says "I want to go to the store." So I'm learning how to write that. Because I'm saying it so they're teaching me how to write it. So I see it and I write it right here and I write it again. *So when I say, I know what I'm saying*. [emphasis added for clarity] Cause I say words and stuff, so now that they say well you got a book they got me. They make me write the word for me on the board. Then I got to write it. Take it back. All day I got to

be with that word. So its, so I can learn the word with the meaning so what I say that's the word. (P10)

P10's comments about the reading process reference his abilities as well as reading being something connected with books. This response is a good example of the overall understanding of the general beginning reader population evaluated in this study.

Five students answered this question by speaking of their abilities or frustration in reading as did P10 in his comment, "Reading you gotta read books and stuff. And I cannot" in the previous quote. For example, "Reading. I hate reading cause I can't read that good." (P1) and "Ah, I barely read that much. [That's ok. What is the thing reading itself] Reading? Oh, you can read anything, I guess. I don't even know." (P16) Additionally,

> Reading is uh, it's kind of like hard for me. I can speak the words and then afterwards, after I read the words they….well I can go to the next line and I really forget the words in the line I just read. It's kind of like you know, hard. I give up. And I do it over and over again. And sometimes I be seeing words and I be, I be seeing like I be seeing a p and I be calling it a d or sometimes. Sometime I do that. And it's kinda hard to describe I guess because I want to read so bad. I be trying to force myself and shouldn't be upset but be relaxing and let it flow. (S12)

Feelings were even stronger in the responses of some students. For example:

> Nasty. I hate reading. Cause I'm dyslexic. [Interviewer: What do you do when you're reading? What's the whole thing about?] Um I'm learning to read because I'm jealous of my brother. He can read and I can't. [Ok, that's a good reason to want to learn. Why else?] Cause when I'm out with my friends and I can't read and they have to read for me. (S4)

Feelings and self-diagnosis of the individual's reading issues came up regularly during the course of the interviews in a variety of questions.

Two students specifically mentioned vocabulary in their definitions of what reading is, but also mentioned their reading abilities:

Reading, sshh. I like to work on my reading because it helps me to stay on top of my vocabulary. That's where my weakness is, with my vocabulary, and after that, when my mother passed away, I just gave up on school which I shouldn't have even done that. Ever since I've been here I've been working on my reading. My vocabulary. That's my weakness. (P4)

Reading… my reading level. I can probably read …I wear glasses sometimes. But I don't wear my glasses a lot. For some reason. I read. I'll put on my glasses in the room but I won't walk around with my glasses out in the open. [Ok, well, that's you and what you're doing. But what's reading itself?] It's that vocabulary. (P12)

Five spoke of the independence that reading provides them. "Reading is when you pick up a book and you don't have to get nobody to read it with you…" (S8) Additionally, see the examples from S11 and P14 below.

It's good when you can read. It's good; it's good. Because instead of asking somebody to do something for you, you can do it yourself. That's why I'm interested to carry it on. So I can read for myself cause if you want to pay the bills you got to ask somebody to write the check for you… (S11)

Something you... reading is like…you know, you gotta you need that to learn in the streets to do things like you gotta pay your bills and you need that like you go shopping…lot of things…you gotta fill out applications and send money orders in like that and stuff you need that. You can't read, how you gonna do that? You can't do that. So those are the main things in life you need, really. You need to know how to do that so you can't always say, "Can you do this for me?" you know what I mean, cause that person's not always gonna be there. (P14)

While the novice readers mention books, information, reading level and their difficulty, concepts of seeing and knowing what it says and vocabulary, only one mentioned anything to do with comprehension in this initial question of what reading is.

Reading means if you read and you read. You read a book and you know….you read a book and um I'm just saying what you reading. And that's it. You got to understand what you read with all in the read. You got to know what you read about. (S10)

In examining the frequency list for the words "meaning" or "understanding" used to answer these questions, the words came up with low frequency as demonstrated in Table 12.

Table 12

Use of Understand and Mean in Interviews

Question	Number of Words		Use of understand (understanding) [understandable]		Use of mean (means) [meant] {meaning} |meanings|	
	unique	total	ranking	frequency	ranking	frequency
Use in general speech						
Use of word in Word Frequencies in Spoken and Written English			456 (2137) -		78 (514) [800] {4138}	
Use in interview questions						
What is reading? (5) [normal readers]	26	37	(25)	(1)	{6}	{2}
What is reading? (5) [beginning readers]	489	2370	126	4	114 (367) {368}	4 (1) {1}
Why do people read? (6)	370	1667	35 (180)	10 (2)	44 (155)	8 (2)
Why are you learning to read? (7)	528	2807	146	4	109 (228) [173]	5 (2) [3]
How does someone learn to read? (8)	454	1729	199	2	88 (157) [347]	4 (2) [1]
How do you know what the words are? (9)	330	1670	165	2	137 [138] |139|	2 [2] |2|
What do you do when you find a word that you don't know? (10)	355	1873	181	2	75 (76) |279|	5 (5) |1|
What do you do/think after you are done reading a passage? (11)	413	1935	26	16	92 (298)	4 (1)
How do you figure out what a story or passage is about? (12)	421	1986	43	9	62 (63)	6 (6)
How do you know if you've understood what you have read? (13)	393	2059	16 (373)	27 (1)	109 (53) [295] {294}	5 (8) [1] {1}
What are you thinking about when you are reading? (14)	523	2822	89	7	74 (401) {402}	8 (1) {1}
How would you teach someone how to read if you met someone who couldn't read any words at all? (15)	629	4050	94 [593]	10 [1]	85 (228) [484]	11 (3) [1]

The Word Frequencies in Written and Spoken English (Leech et al., 2001) places "mean" at 78 in spoken English, so it would be expected that in a conversation discussing reading, words around meaning would appear more frequently and at a higher ranking than in general conversation. In the beginning readers, only four of the eleven questions had "mean" ranked higher than 78 as illustrated in Table 12. In the beginning readers' interviews, "mean" ranked highest in Q6 "why do people read" at 44 with a frequency count of eight. Mean" and its alternates ranked lowest with a placement of 137/138/139 with a frequency of two in answer to the question of knowing what the words are. Answers to this question would not necessarily have an answer including "meaning" because it is a question about decoding. In contrast, the normal readers' answer to the question "What is reading?" ranked "meaning" sixth with two uses, "comprehending" at nine and "understanding" at 25 with one use each. However, "comprehending" and understanding" each had a frequency count of one so in essence they are equivalent in their ranking. It must be factored in that this small usage is from a tiny pool of four responses with a total word count of 37 and 26 unique words.

The word frequency counter has a limitation in that it ranks equivalent counts in alphabetical order, therefore they would technically be equivalent in rank. In the previous example of "comprehending" and "understanding" having the same usage (once), they ranked at ninth and 25th, but there were fifteen other words with the same frequency. The only reason "understanding" has a lower ranking than "comprehending" is that it falls later in the alphabet. Table 13 shows the frequency and ranking. When a word is used minimal times, there are numerous instances of similar usage patterns, making the ranking inconsequential. For the

purposes of the study, looking for terms with high frequency is really the main use of the

ranking.

Table 13

Ranking and Frequency of Words in Experienced Readers' Answers to Question Five

Text name: What is reading?
Date/time: 5/29/106 9:54
Word count: 37
Unique words: 26

Rank	Frequency	Word
1	3	AM
2	3	AND
3	3	FROM
4	2	AT
5	2	LOOKING
6	2	MEANING
7	2	THEM
8	2	WORDS
9	1	COMPREHENDING
10	1	DERIVING
11	1	DIFFERENT
12	1	FACTS
13	1	FORMAT
14	1	IN
15	1	INFORMATION
16	1	INTERPRETING
17	1	LANGUAGE
18	1	ON
19	1	PAGE
20	1	SPOKEN
21	1	STORY
22	1	SYMBOLS
23	1	TAKING
24	1	THE
25	1	UNDERSTANDING
26	1	WRITTEN

"Why do people read?" was the question with the highest ranking of the word "mean" for the beginning reader population, but it is also a question that had different perspectives from the interviewees of why they personally are learning to read and why people read in general. They answered about their desire to read as a gateway to opportunity, whereas other people read for information, for fun, and for meaning-making, as will be demonstrated later. The other-centeredness of the question had a relatively high ranking for meaning by comparison to the other questions.

The next closest ranking for a question the researcher anticipated would have a strong sense of discussion of meaning, Q12, "How do you figure out what a story or passage is about?" was 62/63 for mean/means with a usage count of 6. This further reiterates the lack of meaning focus in the minds of the beginning readers. Furthermore, an additional use of the word "mean" in the beginning readers' interviews reveals a 2:1 ratio of the word mean being used as a colloquial expression for clarification: "I mean…" and "You know what I mean?" rather than ascribing meaning to text.

One curious observation about the concept of reading is also demonstrated in the word analysis of the questions around reading. In the reading-related questions, the word "I" was the most frequently used word in all but two questions. In the question about "What is reading?" "you" was the most frequent word, and in the question "How do you figure what a story or passage is about?" "the" was most frequent, followed by "you" at number two and "I" at number three as demonstrated in Table 14. The Word Frequencies in Written and Spoken English (Leech et al., 2001) lists "the", "you" and "I" in order as the three most common words in spoken

English. Is there a sense that reading and understanding is something other-centered in the minds of these students? Perhaps this is an area for further research.

Table 14
Use of I and You in Questions

Question	Number of Words		Use of I		Use of You	
	unique	total	ranking	frequency	ranking	frequency
What is reading? (5)	489	2370	3	103	1	142
Why do people read? (6)	370	1667	1	83	2	80
Why are you learning to read? (7)	528	2807	1	179	3	79
How does someone learn to read? (8)	454	1729	1	109	2	83
How do you know what the words are? (9)	330	1670	1	99	2	91
What do you do when you find a word that you don't know? (10)	355	1873	1	158	5	145
What do you do/think after you are done reading a passage? (11)	413	1935	1	156	3	79
How do you figure out what a story or passage is about? (12)	421	1986	3	91	2	97
How do you know if you've understood what you have read? (13)	393	2059	1	139	2	111
What are you thinking about when you are reading? (14)	523	2822	1	212	5	77
How would you teach someone how to read if you met someone who couldn't read any words at all? (15)	629	4050	1	243	3	137

The concepts of reading for the new readers are quite different than the perceptions of established readers. All four established readers mentioned reading as something about meaning-making. The comparison between these readers' thoughts and the concepts of the beginning readers is listed in Table 15. As with the other participants, the established readers are coded E1-4 to identify them.

Table 15

What is reading? Beginning vs. Established Readers' Answers

Beginning Readers' Concepts	Established Readers Quotes
Books, information	(E1) "Looking at and comprehending words and taking from them information, facts, a story"
Reading level, difficulty	
Seeing and knowing what it says	(E2) "Looking at words on a page and deriving meaning from them"
Vocabulary	(E3) "Understanding the spoken language in a different format."
	(E4) "Interpreting meaning from written symbols"

Perceptions of the reading process

One indicator of the reader's conceptualization of what reading consists of is the information that would be conveyed to a complete novice learning to read. When asked how they would teach someone how to read (Q15), seven began by informing the researcher that they couldn't possibly do such a thing. For example,

> I wouldn't able to teach them. But I know a lot of words. I won't be able to teach them, but I know, but I do know a lot of words. A lot of words. But I wouldn't able to teach anyone. [Why not?] Because I don't know enough to teach someone. [Well, you know more than they do if they knew nothing.] Maybe, Jean. I don't know. I doubt it. You know. I don't know. Really much I know. Not. Maybe much I know because they have words here I don't know like I didn't notice this word here. ("private" on the consent form) (S7)

Two respondents in this group spoke of bringing the novice along to the program they attended or sending them to school:

> Well, I wouldn't…I would try to help them. If I couldn't help them, I would recommend that they go and get help. I would bring them to here. To the program. Ask them to help em. I wouldn't try…I could try but I wouldn't say, I probably won't be where they should be. You know. Their level. Where would they be. (S8)

However, most of the students mentioned a skill-specific and often sequential approach, looking at the letters and sounds. For example, "Oh you have to sit down together and study and say can you read this letter or that letter. That's the only way you can do things." (S14) and

> I'd say you gotta sound things out and all that stuff. I'd take em step by step. Just can't read something to em and expect em to follow your voice. You're reading all the words. So you gotta go step by step and get em to sound out words. (P1)

Another student mentioned a potpourri of skills:

> Well for one, I'd give them alphabetical, start em off with the alphabetical um letters and then what I would do is try to work with it, vowels, and then what we would do with, we'd try to go you know, go to the library and find a one that he could….if he could just sound out um anything a part of that book, we'd work with that as far as try to get him to break the words down. (S13)

> Two specifically mentioned "breaking it down" for example, "The way I got teached.

Show how to break it down. [How would that be?] Um the way it sounds." (P7) This concept of breaking it down as well as this student's mention of sounding things out is further expounded on in the section on decoding. One student even brought up a phonological concept:

> You sound out the words. Like that, then. You sound out the word or you use your fingers. [What do you mean you use your fingers?] I use my fingers to say the word. Like /th/ /a/ /t/, /c/ /a/ /t/ (touched finger for each phoneme) [you use your fingers…so what does each finger represent?] Like /th/ /a/ /t/, th-at, that. (S4)

> Four mentioned using easy books, but also spoke of sounding things out, which was

another common phrase:

> The same way I learned. [how?] I'd get 'em a baby book like Al and them did to me and have them look over like cat dog and stuff like that and try to sound it out not… least I know how.. what it is so I can say it right out. And I can spe.. I can sound em out with no…a little bit. I can sound words out. So I try to do the same as me. Teach em the same way as I learned. You know. I'd teach em the same way . I'd say, I don't know much, but I'll give you, I'll try to help you with what I know to help you get going and then you can go on from there. You know. That's how I learned you know? … (P14)

I would start like I did. Go to a lower level book. Start off with the you know vowels and have to explain so he knows what the vowel means, you know, each word, the words, break it up like I've been taught into a syllable and where you get good at. I wouldn't go to a higher level I don't know where I'm being. I would stay at a level where the vowels, short. That's the way I been taught so you know I been saying. I wouldn't give someone, if he's on the fourth grade level, I'd start and work my way up. The teacher told me that you know, over years I've been growing. I've been working on my vocabulary. It's hard. Some of the words it's hard for me to understand. Like the sentences here. Words like that I would know. Meaning…words like that I can understand. (P4)

Start em off with a children's book, little words. All you got to do is start em off with a few certain words, you always see that will be in the middle like id or ood. They're always in a sentence. I have trouble with the back part of the words. (P3)

One student would use spelling as a vehicle:

Well if somebody come up to me, like when I first come here at nights. It were a guy and uh, I know a bit more than him. So I used to sit, me and him used to sit down and I used to call him a word… I used to tell him how to spell the words…I used to show him how to spell the words you know. I used to show him the words he was missing and me and him were 1 by 1. 1 on 1. And I think he learned something. Something from me. You know. I really think he did. [so you would tell him the word, then tell him how to spell it. Why'd you do that?] Because you learn how to read and I learn how to read. We need help. You know so all my very help you know I'm gonna give you some of mine gift and you pare it down for somebody else when you learn it. You know. That's what it means. Somebody had to help me to help you. So who help me, I give you some words too. Cause somebody gave me something so I give it to somebody else. And you pass it on down. You know. (S2)

This student's willingness to help lift someone else up was a recurring theme in five other

interviews. One student would act like a coach, even though she didn't know what to do:

How can I teach someone that don't know how to read? Well, like for once I would use like, I would tell em don't be shy. I used to be like that you know. Everything comes in time if you take your time so that you and don't be afraid to ask. Cause asking won't hurt nobody. Do what you can. (P11)

The new readers therefore, had some understanding of the sequential nature of the

reading process based on the elements described in what they would teach.

Even though most of the interviewees were able to identify some type of skill or process common to formal reading training, a few really had no understanding of the process. For example, "Um I help them to learn how to read. [How?] To pay attention to me, pay attention to me and tell them how to read. [How would you do that?] Um I would do like follow the words to read." (S3) and "You would like uh sit down with em, and you would tell em what the word is and pronounce it and stuff. The words. [Anything else?] Just help em read it." (P16) Like P16, P12 believed there was something to do with talking to them that transferred the concepts:

> How would I teach somebody to read? Oh sit down with em and talk to em. Just like any mom or dad would do with anybody. Ask him, "Do he has a book or whatever." Go to the library, whatever. [anything else?] No. I wouldn't want to see people brainless out there. I see their minds filled with something good. (P12)

Not surprisingly, no student talked about working with the potential protégée for understanding of what they would be reading. They all were focused on discrete skills. This runs parallel to the way children learn to read in early elementary school, then read to learn later on. The students seem to understand that others read to learn, as illustrated in the next segment.

In discussing the question, "Why do people read?" nine addressed the concept of learning specifically using the word "learn" in their answer. Seven spoke of understanding the world/society such as would be gained in reading the newspaper, seven spoke of enjoyment or passing the time, and three mentioned the concept of bettering themselves. One answer mentioned several of these concepts:

> So they get an understanding of what their mind can feed. To feed their mind and too from bein like so they'll so they know what's goin on with…really it teaches you how to speak right at least. Speak your words or whatever. Because without reading your mind would be brainless. (P12)

By contrast, in discussing why they were learning to read, twelve spoke of self betterment, seven spoke of the independence reading would provide them; four because they wanted to, and two because of pressure from family members. For the majority, reading was seen as a ticket to better opportunities. A typical response was:

> Because I want…because I want to better myself. I'm tired of not knowin' how to read. I came here because I want to learn how to read because I want to better myself. I want to you know, don't want to ask somebody to do nothing for me. I want to do it myself and go places and knowing where I'm going and you know, what to do. How to put in a application you know. Stuff like that. And if I want to go somewhere, I ain't gotta ask somebody would you go do this or go that, and you know, the words is right there. You know what I'm saying? And I just want to learn how to read because I'm….I got to that point where I just can't take it no more. (laughs) (S12)

In summary, it would appear that NSE beginning readers define the reading process as a set of skills that they don't have that they would like to gain to better themselves. Unlike experienced readers, at a conceptual level, reading is not about meaning making.

<div align="center">Question Two: Metacognitive Processes During Decoding</div>

The second research question asks, "What metacognitive processes do NSE adult beginning readers use during decoding?" Two questions from the interview were targeted for this information: (Q9) How do you know what the words are? and (Q10) What do you do when you find a word that you don't know?

The most common strategy was to ask someone else. Although many of the students could describe the process of learning how to read in the previous topic, for some students, knowing what the words are was almost a mystical process. It was as if the book had the words for them to know. Table16 summarizes the strategies.

Table 16
Decoding Strategies

Strategy	Number of references
Ask someone	14
Break down the word	11
Look in the dictionary	10
Sounding out the words	9
Skip it	7
Someone shows/teaches me	6
Determine from context	4
Mark as unknown then come back	4
Look for similar words	3
Study and learned it	3
Automatic recognition	2
The book has the words	2

When asked the question, "How do you know what the words are?" two students

indicated the book knew. For example, "The book tells what words are. [How do you know what

the word says?] Word says um the word says 'Once upon a time there was …a boy.' And I read

that. [And how do you know which word is "once'?] It's the first, beginning." (S3) Similarly,

> Um, they song [sic] like um the, where, when, and um….sometimes you read the book
> and sometimes it have go, and um on. Where stuff like that. I got a book at home that I
> read every day and then the words that I know in the book. And sometimes harder ones,
> but I just basically go with the easier ones. (S10)

Students had a variety of methods for decoding words. Nine students were aware of the

concept of "sounding out" words. For example, "How do I know? Sound em out, I guess." (P2)

and "Well I really don't say. I try to like separate them and work with the letters and put it

together and sound it out."(S13). One student mentioned the alphabet, and "putting together":

> How I know what they are? Well, I know the alphabet. What the alphabet, what some of
> the words I have hard time putting them together. You know like rhyming. Putting them
> together. I having a hard time doing that. And they been showing me all the time. It just
> don't program for some reason. I don't know why. (S7)

> Eleven students "break down" the words: "Break em down"(P7). One student used a pen

to assist the process:

> If you don't know what they are, you break them down and you get somebody to help
> you. If nobody's there, maybe you take a pen, you, you put a line underneath that word
> and when somebody's with you or if you want you call somebody and you spell it to
> them and they help you out. (S8)

Another student was able to break the word down and recognize it when he realized what half of

the word was:

> I have to read the ?? (bowl blank? Whole thing? unintelligible). Myself I gotta read to go
> half of the word and then I'll be like I know they'll say a word that I don't know so I'll
> go blank and then I'll know what that word says and that word will come back to me so
> then I can read the whole sentence. (P1)

> Some even used the word syllable: "Sounding out the syllables" (P5) and "I sometimes

gotta break it into three different syllables to get it. Sometime I don't get it. I just have to drive

past it." (S11) Three of the students mentioned both break it down and sound it out in their

responses.

In some of the interviews, word recognition was considered an automatic process.

Several of the beginning readers were aware of their ability to recognize certain words. For

example, "How? Um. How do I know what the words are. I don't even know how I know it. I

just know it." (P11) "I knew a lot of the word. Like the easy words like how do you know what.

Big words I don't really know." (P9) Automaticity of word recognition is a goal for all readers.

One student used the word "recognize" in his descriptions, attributing recognition with

understanding:

> Well, cause when I see em, you know, I can recognize em if I see em but if I can't see em, you ask me to spell em I can't spell em. That's my problem now. I can't spell em. I'm trying to work on that. Trying to get the guys, trying to get Al (the teacher) to help me, like I said, to work on that, to help me with the spelling. Cause I can read a little bit, I can read pretty good now. But I can't read, like I said, I'm not as good as you would think, I'm like let's say second and third grade books. You know what I'm sayin, something like that. Up in that level. Know, cause I still hesitate on things you know.
>
> Like that paper over there (consent form) I was reading it too slow, but I have to read slow, but I was reading it. I know what them words was when you was reading it to me. That's why I recognize, that's why I understood what you said, because I recognized them words, cause them words are my every day words in my books. Like, you know, I always see them words [good] but I'm saying like, if I don't see em I can't write em. But, you know, I see em, it flashes right up, boom. That's you know I mean That's how it is with me. I don't know how other people do it, but with me, that's it. It flashes in my head. So I say it to myself, I just need some more people to work with me to keep pushing me. So, I, you know, I try a lot. I try hard too. (P14)

The previous student mentioning the word "flashes in my head" is an interesting concept. It is

almost as if it is seen in the brain in a flash of recognition.

Many mentioned they know their words because they study them and understood that

after a while they had learned the words and could recognize them: S14's answer to how he

knew the words was, "I study." This idea was repeated by S2 and P15:

> Cause I study every day. I look and see these words here. You look at these words every day. These every day words you know. These words, I've heard once you learn em. But people say words every day different kinds of words and you can say like, what? Who? Where you live at? People say different words for every day. That's how you learn different words. How you learn how to read. If you can spell the word you can learn to read. But you know you have your vowels, your contents (consonants) if there you can put them together if there not reading there not gonna pull them to me. (S2)
>
> You gotta keep practicing. When I practice, I have problems with like, I'll start reading it and all of a sudden it's like I'll stumble on one word and it kills me because I have to go back to the dictionary and then all of a sudden next you know its like I forget what that sentence was. That's where it kills me. [That's interesting. Does it happen a lot?] It does.

Lot of times what I do is I just skip over that word and just keep on going. But sometimes maybe that word is like the most important part of the paragraph. (P15)

The concept of studying was repeated by four other students in a more global way in other aspects of the interview as they discussed studying a manual or story. This was more of a review process for them than memorizing and practicing their words as with the previous students.

Others knew the words because someone had shown them. School was mentioned twice: "Cause you learn em when you're younger, and as you go on from different grades they teach you and stuff." (P16) Additionally:

> What do you mean? You gotta be smart. What you gotta go to school for. The experiences of the past. Say I'm walking down the street and a guy asks say, "Hey heed a hand. What's this furniture?" You definitely gotta know. To play. See you have to know how to read a little. So you come out in the class. And get more knowledge and before you know it….I like word problems. I can do word problems.(P13)

> By people showing me how to pronounce them and somebody showing me how to use the words. By holding up pictures and stuff. Showing me what the letter is. That's how I got used to the words on this page. (P12)

> Uh, well, I heard other people you know, say the word before me, after you study it for a while, after I study it for a while, well, then I begin to know the word. Begin to like just come to you. I you know, you know, you just can see it. You know what it is. Once you see it, you say, Ok that's it, like you say that word is can or something. You say, oh, that's can. You know. You know it comes right to you and um that's the way I learn to read. (S12)

One individual mentioned the dictionary as a source for knowing the words. This particular individual was at the higher end of the reading scores with a 2.9, which may account for the higher degree of sophistication in thinking about meaning for words rather than recognition.

> Well I know what they are by locating the words in the dictionary, the meaning, the meanings that I try to stick with the meanings. But sometimes they can be hard words

that I never heard and I try to focus up looking them up in the dictionary and try to get the true meaning out of it and that's how you build a lot of things to what they are. It's gonna take a while for you to try to pronounce it in a way, but instead of looking in the dictionary so much, but you want it in your mind; just to keep it in your mind instead of looking at the book a lot. (P8)

Many of the answers to the question "How do you know what the words are?" (Q9) were

answered as if the question were what was asked in Q10, "What do you do when you find a word

that you don't know?" Ten of the students answered this question by saying they would ask

someone. Most of the time, the students would ask the teacher, but many also said they would

ask whoever was around for help. A typical answer would be:

> You ask what the word is. [Interviewer: Who do you ask?] Well, if you're in school, you ask the teacher, if they're available. If not, then you ask somebody that's next to you. If you're in jail, and you're in like a block or something, then you can ask your roommate or somebody that you talk to. (P16)

One student mentioned asking for help, then described his strategy for figuring out a

word if he was alone at the time:

> By myself or when I'm with somebody? When I'm with somebody and I don't know the word I'll ask for help. [Interviewer: And when you're by yourself?] I'll either…if I can't figure it out, I mean, I try to take it like…look at one of the words I do know if I do say for instance, I knew like bat, then I take and go, well then the word cat came up and I didn't know it, I know it rhymes with bat so I look at the word and say, oo, there's cat, there's bat. So you know and I take the ending sound and I know the ending sound is /at/ so I'll take it and I'll match it together. So that's how I'll know. Even like, you know I'll match it together. Find a way to match em. (S8)

Seven mentioned that they just skip the word: "I skip over it. In some sense I know I

should write it down and try but after a while of getting frustrated sometimes I just give up on

that word."(P15) Even though some skipped it, they would incorporate additional strategies for

determining the word, including the skills mentioned in Table 17.

Table 17
Specific Decoding Skills Used in Conjunction with Skipping the Word

Skill	Comment	Interviewee
asking for help	I leave it alone. Then if I find somebody to ask I'll call my cousin and spell it out and she tells me it was	S11
breaking it down	I jump right over it. Sometime I try to break it but sometimes I just jump right over it. [Interviewer: Sometimes you break it down though…] Sometimes I break it down.	S7
using context	Sound it out or by pass it. You would know the word after you're done reading the rest of it.	P3

Similar to the way students answered the question of knowing what a word is, several students use decoding skills, specifically syllabification to determine words they don't know: "I break it down into like sections and speak them out." (P5) Two students used specific strategies. One draws lines through the word, and another, looks for familiar pieces of words.

Oh when you find a word you don't know I always put a line through it. [Interviewer: And what do you do then?] When you put a line through it and then um you can like all the time, break it down and you can say one part and then you can read the other part and then you can put it together to get the word. (S10)

If I find a word I don't know, I might try to break it down. If I know the last, like my name, If I don't know that word, I may see r-o-y spells roy, and you have l-e up front. L-e? L-e? What is that? L-e? and that e says a word. And I try L-e-r and I say what that be? O-y? R-o-y is roy. And I might ask my wife, what's l-e spell and she might look and me and don't say nothing. You know she say you don't know that word? so like that. But if I ask her a word, she says break it down. [Interviewer: You have that break it down pretty well. Do you find it's the bigger words that give you more trouble?] No. because I think the bigger words more easier than the small words really. Cause the bigger words you might have maybe three sentence (syllables?) you can break it in three different ways.. You know you break, reading down here. I say my mind got two. I got Le and roy. You say put them all together. Le-va That's got two. Le and va. Le-va, le-va (S2)

One student "figures it out":

I…I don't know. Its just, I try to figure it out, I try to figure it out and I can't and it bothers me because I can't figure out the word. And then when someone tell me what the word is I, oh, I knew what that word was. You know. But, brother at that time when I

can't put it together. You know. And my son come down here. He be helping me out and stuff. Dad, you know what that word is. Yeah. (laughs) We just said that word. Can't make it. I forgot the word. That's that. And you just keep doing it over and over until you can keep it in your head. And some words I have no problems with; and some words I do. And some words I have no problem. And some words are easy, but I have a problem with keeping them in my head. And I was saying, well what's going on? What is going on? You know, and then some parts of the book I just can read, read, read until I get to the, you know bigger words or something and then I can't think about what those words are. Oh, man, this is hard. And then sometime I feel like I just, I want to give up with this, but I can't give up now. I've come too far, man. I can't give it up now. (S12)

Surprisingly, ten students, including those in both the private centers and the prison

mentioned the use of the dictionary. The word dictionary or its plural came up twenty two times

in the course of the interviews. One student gave a clear explanation of his thinking process

using the dictionary:

I try to look it up in the dictionary. Since Al taught me how to use the dictionary. Cause it's broke up. And I tried it. And I try to take it and I write it cause its small and I'm just about to see. So I make it on a piece of paper I write it out bigger and put the slashes in there and like in the dictionary and I try to sound it out. I try. Sometime I get it; sometime I don't. I say another word instead, but I'm close. I'm real close but it's not the word that I'm trying to get so I'll just say to somebody, somebody just tell me, and they tell me what it is, and then I try to recognize it and remember what it is in case I need it again so I don't have to go through that again. I try, but sometime I have to go through it. (P14)

Several of the skills mentioned are similar to what the experienced readers mentioned,

though the advanced readers are most likely to utilize contextual clues to derive the meaning of

the word. The consideration of word recognition did not come into play in their answers. To

them, not knowing a word meant not knowing the meaning, rather than recognition or

pronunciation.

<center>Question Three: Metacognitive Processes of Comprehension</center>

The third research question asks, "What are the metacognitive processes used by NSE

adult beginning readers during the meaning-making of reading text?" Four questions were

included in the interview to target this information as shown in Table 18.

Table 18

Interview Questions Answering Research Question 3

Question	Interview Question Number
What do you do/think after you are done reading a passage?	11
How do you figure out what a story or passage is about?	12
How do you know if you've understood what you have read?	13
What are you thinking about when you are reading?	14

Recognition of understanding

Some students do not appear to have realized that the point of reading is making sense of the text. Two of the questions in this section required the students to explain how they understood material they had read and to explain how they recognized understanding. Interview question twelve asked, "How do you figure out what a story or passage is about?" The word "passage" in this question confused several students, and needed to be explained to them. Understanding for most of the interviewees came from something other than thinking about the information contained in the text. Table 19 summarizes the responses with the elaboration and supporting quotes to follow.

Table 19
Meaning Making Strategies

Strategy	Number of Responses
Comprehension Technique	
Look at the pictures	7
Look at the title	5
Visualize the story	4
"By reading it"	4
Ask questions	3
Knowing the words	2
Assessing Understanding	
Does it make sense?	7
Can discuss with teacher / others	4
Say all the words / sounds good	3
I don't understand it	2

Four students referenced the pictures. This is not surprising since readers at this

beginning level have illustrations on the majority of their reading materials. For example, "If

there is like a picture inside in the book and that page is a picture it's trying to talk about.

[Interviewer: Anything else?] No." (S11). S10 has similar thoughts:

A story can be….a story can be like you can read about a person and then…..
[Interviewer: How do you figure that out?] Um sometimes figure out, you have to um,
you have the pictures in the book you know when you read and you know that's story's
about them. (S10)

Like you read a story. [Interviewer: How do you know what it's about?] Fishing. What's
that word. Like the mother duck…bout this um little bird watching the mother.
[Interviewer: Oh, "Are You My Mother?"] Yes. You have the pictures and you read it
see? [Interviewer: The pictures help you?] Yes. [Interviewer: How did you know that

wasn't about rabbits?] You have bird. No rabbits. [Interviewer: What about when there aren't any pictures?] I get very confused. (S4)

S4 mentioned that without the pictures, she gets confused about what the story is about. For these

students, it is the pictures that define the meaning of the story.

Others were aware of some of the literary elements, such as the title, end flaps and back

cover of a book. Five students mentioned the title as key to comprehension. S2 provides good

insight into the thinking process:

> Well let's see. Like a story, I would start with the title. The title of the story is. I'd say like….Bunny. I got a book in there that's… Millie Rabbit and Her Family. I know the title of it. And I see the family. So I started reading it. And little tiny words. I read the words that I know. The words I don't know I write em on the side. And I keep on reading what I do know. And I say, "Don't make sense. Don't make sense. This don't make sense." Then I might tell you what these words and you tell me. And I write it down and I try to remember cause I know I'm gonna come back to it. That it's somewhere; it'll be down here again. So I know the title's about Molly and Her Baby Rabbits. And I know the title's talking about Molly and her baby rabbits. It's talking about the family. So I know I gotta remember now. Mother. They take her children how to hunt you know. So I keep thinking she gotta teach them how to hunt how to get food. How to provide. Cause I got a book here about her mother and her family and she made them a bed out of her soft fur and she dug a hole and covered up with soft weeds and stuff so that other animals don't find em. That's just all the words I didn't know I just wrote em on the side till I learn em.(S2)

Some believe that understanding comes from knowing the words and others included not

only knowing the words, but complete reading of all of them. For example, "Oh. If I know some

of the words, then I might know what it says," (S7) and "When you're done reading it.

[Interviewer: Yeah. Then what?] I don't know," (P7). P12 saw understanding as a progressive

process:

> By reading it. By reading the whole book. Take time as you read it. Sometimes when you start off it don't really say too much until you get like the middle of it so you know what's going on. Keep on reading, reading. Depends on what kind of book it is. It might have 300 pages. 200 pages. (P12)

A few spoke about understanding the information. "How do I figure it out? Like when I read something? Um I try to understand where, what are they talking about." (P9) One mentioned questioning the text, although this may have been a guess, based on the probe for additional information: "Ask questions. Whatever the story was about. [Interviewer: What do you mean?] I don't know. I don't get into it that much." (P2) This particular student was a brand new reader that his teacher was particularly excited about because of his recent progress from total non-reading. Something had appeared to connect with him in the process and he was making rapid progress in his reading development. It is possible that his knowledge that questioning the text and looking for information may have been key in his understanding of the process and rapid increases.

P11 speaks of "reading between the lines" and visualizing what he had read:

How? You gotta understand what it means and you gotta read between the lines. To understand what it means and say… that's it. [Interviewer: How do you do that?] How do I do it? I uh say like, when you say, when you're talking to a like person you gotta read, you gotta visualize everything that they say and then you just you say in your mind in your own self. That's when you read between the lines. Like you know can tell if they're lying or not. (P11)

The concept of picturing the information mentioned by P11 ("visualize everything that they say") is reiterated by P8, although "focus on the picture" may refer to the illustration as with the other students who needed pictures to know what a passage was about. It appears from the context of the discussion this is more about visualizing the information.

Oh when you read it and when you understand it. Understand it means a lot. I mean you gotta understand a story when you're reading it, yeah but I think that people read the story but the aren't hip to the story yet. You gotta go over it again to really look at it. And some stories they just gonna mess up your mind and like wow, what's this about. When you're reading it, it's like a crazy story, yeah but you're not really getting to the story real well until you really focus on the picture and that's how you get better at it and that's

how you know what the story's about. (P8)

When discussing question thirteen, "How do you know if you've understood what you have read?" understanding varied among the interviewees, but most were unsure of understanding, as will be detailed shortly. Of the four people that mentioned the information making sense, S3 spoke of imagining what was occurring, similar to the visualizing/picturing concept of the students answering the previous question.

> Um…stood? [Interviewer: (clarifying word) It makes sense to you] It makes me like sense. That's the story. [Interviewer: In your head, when you're reading it, how do you know if it makes sense?] It makes sense that I …you read the book. You imagine it ary…imaginary. In your head imaginary. [Interviewer: Hmmm. Tell me more about that.] Imaginary you read a book, you imagine it. Yeah. [Interviewer: So you imagine it in your head? That's wonderful. What happens if you don't imagine it?] Um…[Interviewer: What do you do?] Write it down the paper or something. [Then what?] Then um then you read the book again. Read the book again. (S3)

P5 spoke of internal clarity: "Because there is a clarity; there's a clarity within myself of being assured that I know that I can do exactly what I might have read."   S12 referenced this same inner awareness:

> How do you know if you've understood what you read? Hmmm. You know if you understood or you didn't understand it. What's in it. I don't know. It's just inside of you; something inside of you if you know if you understand it or you didn't. and if you didn't understand, you gonna, it's always gonna be pressing on your mind. Like I wonder what did that mean…what did that mean? What did that mean? If you understood it you open your mind, it's not gonna question you like that. Of course mine did (laughs) [Interviewer: So your mind questions you?] Yeah. One thing I don't understand. Go ask someone. You know. If you, what does this, what does that mean? (S12)

Some didn't know how they understood, yet they understood when they didn't understand. There was an awareness about needing to reread if they didn't understand This was the initial answer to determining if there was understanding for S4: "You read it again. [Interviewer: How do you figure out to yourself whether you've understood it or not?] I don't

know." (S4) Comments about perplexity about how or why they didn't understand were

common. "Sometimes I don't. That's where I want to get to. Like when I don't understand. Why

don't I understand. You know? And I don't know why." (P9) S2 and S11 repeat this confusion

over not understanding, and the need to reread.

> That's what I don't know. Cause I gotta go over it an over it and over it to really to
> understand it. Now you can't, I can't just read it like you read it cause you a better higher,
> and you read it. I gotta sit down and think about it. I say mother made a bed out of some
> fur of her fur on her body. How do you make a bed out of some of her fur on her body?
> Then you think about it (scratches) and she use her paw to take some off and made a little
> soft bed. Yeah. I have to think about it. (S2)

> Sometimes you understand but sometimes you don't understand and you come back to it
> and say I don't understand. Sometimes you just leave it alone. [Interviewer: When do you
> decide when to leave it alone or go back?] Like if I started to read and I just don't
> understand it, to leave it alone and just come back to it when I get home. When you got
> home and you have some more time. Go back at it and read it again. Break it into
> different syllables and put it together and see if you can get it. I don't get it so I just
> forget it. (S11)

Others spoke about knowing the words being the key to comprehension, similar to the

way the question of knowing what the passage was about was answered. "If I could read the

words then I know what it says." (S7) and "Some of em you do a little; some of em you don't.

Then I bypass." (P3) P4 speaks of knowing words, and rereading until there is understanding:

> If it's a word that I understand, the words that I know I know. As I'm reading it and I just
> keep going over and over it until I actual can, to where I know it makes some kind of
> sense. If it don't make no kind of sense then I don't want to even read it because I don't
> understand what it's saying. So even though I try to help myself or I still don't I'm still
> not getting the meaning of what it really meant. (P4)

Additionally, P4 spoke of selecting material with familiar words, realizing that knowing

the words assisted with comprehension:

> Well I'm not gonna give something that's you know, that's gonna be way out of my
> leagues. I always try to stick with something with the words I can that I've good a good

understanding with. If I don't understand these outside words I'm not gonna even mess with it. I just overlook it and go on and read something else. (P4)

One student spoke about knowing the words, but not understanding the content:

I try to do when I'm reading, but sometimes I don't understand it. That's what I'm trying to say. Like the other day I had this science thing. And I could read it but then she was telling me "What does it tell you?" And I didn't really mean that understand and I was guessing. [Interviewer: Were you saying the words?] Yeah, I was reading the whole thing but I didn't understand it. I don't know why I mean it was like cause I couldn't get it. (P9)

This was the only response that seemed to discuss knowing the words without understanding. Although there were many responses of awareness of non-comprehension, this is the only one that seemed to realize he knew the words but was not grasping the content of the passage.

Two students spoke of the aural process of reading; perhaps intended metaphorically. Beginning readers generally are in settings where things are read out loud, which contextualizes this. For example, "You don't [understand] (laughs) till the story sounds good. And when it sounds great, it's like OK, don't sound like its kind of crazy, but it sounds ok. You know."(S13) Additionally,

You got to know saying what you reading *cause if you don't know what you're saying* (emphasis added) you don't know what you're reading about. Bout anything in the story and sometimes you know you can't say well um, I read this book. Now who was these people I was reading about? Who was these people? You gotta to understand who, who is they, who they is. (S10)

Four students spoke of needing others to be involved in the understanding process; in particular, asking for help to understand, when the teacher asks questions about it or being able to participate in a discussion about the reading passage. For example, "You talk about it. You listen about it, you talk about it and you ask somebody to explain it with you. And you give your

opinion on it." (S8) In some cases, the assessment of comprehension was performed by someone

else:

> How? Cause like I said. I read something and you ask me about it and I tell you about it
> that means, "Oh, he understood it." You know, that's like talking to me and you know
> I'm saying and I'm listening and you ask me things and I reply back to you that means I
> understand what you're asking me. So I'm hip to all that. (P14)

One person believed that understanding was different for different people. This is a fairly

sophisticated concept, based on individual interpretations. It would be surprising for a passage

written at a second grade level to have more than a literal interpretation. P15 also scored at a

higher reading level (3.3) than many of the other interviewees, which may account for this

perspective.

> I try to understand it best as I can, but sometimes, the way some books, like, if I, if I take
> it one way I could show that same book to another person; they could read it and they can
> take it a different way. I'm taking it as my value of what it is. Unless its, its, the author
> specifies that it's supposed to be taken into this text right here. Or how this person is
> supposed to see themselves. Now, then, that's how I'd take it. (P15)

Metacognitive Tasks During Reading

To further understand the metacognitive processes involved with comprehension,

students were asked about what they were thinking about during the reading task and

immediately after reading. These questions required the students to recall what they were

thinking about rather than doing a think aloud during the reading process. This was a deliberate

choice made in the research process to proceed this way, even though a think aloud might have

been more effective to elicit these types of responses. There is a high potential for intimidation

for a new reader encountering an unfamiliar passage, especially in light of doing so in front of a

"stranger" as the researcher would have been to the interviewees. Rather than deal with this

prospect for confusion because of the varying reading levels of the students, the choice for

reflection and recall of personal metacognitive methods was used. Table 20 summarizes the

interviewees' descriptions of their after reading process.

Table 20
After Reading Processes

Task after Reading	Number of Responses
Repeat / Reread passage	11
Feel Proud	9
Evaluate performance	8
Reflect on information	5
Relax-sleep	5
Write	2
Assess understanding	2
Discuss with someone	2

Several students mentioned they are thinking about what is contained in the text when

they are reading. There appears to be understanding of the information being read and the need

for comprehension in these quotes. For example, "I think about what I just read," (P2) and "I'm

thinking about what's gonna happen in the story," (P12) and "Trying to like, understand what

I'm reading. I want to understand what I'm reading, I want to be sure if its good for me." (P5)

There is a sense of concentrated effort:

> Reading? Oh when you're reading. Wow. When you're reading you got your mind on
> what it means. When I read, I got my mind on try to stay in it long enough to get the
> paragraph done. Sometimes I'll read something. If I don't understand it I won't read it.
> I'll be like blank blank blank blank and I'll be reading and I'll give up on it and
> sometimes it makes me mad and sometimes I'll cry and sometimes I'll just say bump it. I
> know I'm, I know, my bother told me that I know how to read what made me do this.
> Some people don't know how to read that. So I do know how to read. I just ain't a good
> reader, strong or better reader. I read it like I supposed to read it, if I think I am.
> [Interviewer: when you said bump it, do you mean forget it or give up] I meant the same
> thing. Paying attention to my life what goes on. I think I'll say like ssssst. Oh…I won't

say bump it but I'll just end up picking up the book again and trying to read so I'll say forget it. I get mad. Forget it and and go on with something else. (P1)

Like P5 above, several students would analyze the content for usefulness in their lives, as

well as other personal connections. One individual pictured herself in the story:

When I'm reading, I always find myself, like if I'm reading…now I'm reading the Cat in the Hat book. I always find myself traveling. (laughs) Like I want to travel with them. Or be in the story with them. Sometimes…you ever… I don't know. Like the pool, the cook, the kids…Goldilocks…you ever hear about that? I always picture myself being Goldilocks. I don't know why but I do that. (laughs) that's how… I shouldn't be laughing but I always picture myself being that little girl. You know? And then I…Why do I do that? Why? But I'm doing it. (S8)

Another student thought about the impact of the content:

I think about a lot of important things when I'm reading. I think about even the little things. Just like with that hurricane in Louisiana. I leaned a lot about that. And I thought, wow, that is terrible. It destroyed all those, it struck all those houses. [so it sounds like reading is making you think about other ideas, too?] um-hum. [When you're reading a story, does it do that same thing too?] Yeah. (S10)

Five students claimed to be thinking about improving their reading skills and their

potential advancement as a result of these gains. It would be surprising if the students were

actually doing this during the actual reading tasks, but because it was mentioned by one in six

interviewees, there is significance in this response to the question 'What are you thinking about

when you are reading?" The simple answer, "To learn more. How to be a farther [sic] in

reading." (P11) is repeated by P4, P8, P10 and P14.

I think about when I'm reading I'm getting educated a lot and then I put my mind into something that's really important to me to try to build up my reading skills and educate; to pay attention and to stay focused on it. On what we are doing in the class. (P8)

I'm thinking about I wish I could get my GED or something. How even if I don't get that, at least get smart enough; close to it that I could pick up a book with big words and stuff and just read it. That's showing me that I ain't got a GED but you know I can just pick up something and read it with no problem, like the newspaper. I have problems reading the newspaper so I'm not at that level yet so that tells me I got to keep working at it. (P14)

I'm thinking about my self of trying to get my education back and how I see myself growing little by little by experience on my own and seeing where I'm growing at. If I'm not growing too much then I need to sign up for school and explain to my teacher where my weak points are. (P4)

When I'm reading, I think I want to better myself now. You know because it's a lot for me out there. When I get out someday and I want to you know I can accomplish a lot and provide better for my family. You know, it fine you know reading and writing and I can be a better person because I know I like the bible and if know I can know how to read I know the bible can be a tool for me someday. That's a little body(?) talks to me the people that talks to me to say that to me to be positive. Like my wife. My wife reads the bible. My wife's always reading the bible. (P10)

It is notable that all these personal advancement ideas during the reading process occurred only among the prisoners. This is the only time this pattern emerged in one segment of the interviewees. This may be reflective of the philosophy of the school at the correctional center. In all other examples, there was representation in both the private and prison sectors.

As with the other questions, the frustration of not understanding recurred. Several individuals spoke about this challenge. P13 mentioned the frustration of not understanding, but also the value of the content to his personal experience.

When I get stuck I cuss. I get frustrated but you know sometimes it ain't called for. The work I'm doing now? What's to say I'm ever gonna use this again. Know what I mean? I read this thing, I'll do this work, I'll bring it back. There. It's done. All this work is done right here. (P13)

When asked about understanding the material, one student spoke about what appears to be a visual processing issue:

When I reading after a while I get black out. I just kind of just just…I don't know why, but I guess you know, like black out. Just don't want to read any. After a while, you just, I can't focus and so I have to stop. Stop for a little while. If I stop, like if I reading you know, it's a lot. Then I have to stop for a little minute and then, and then start. Look at the paper again and then start all over again. Not all over again, but right stop there after a while the paper again. I have to work like over here to read. My father (?) like here for a

while. After a while I just think then have to push it over here. (moving paper distance) Then after a while I get black out. [Interviewer: Does that happen all the time?] All the time. Then I get black out. But why should I cannot space to there. Start all over again. [Interviewer: Did you say something to your eye doctor? You wear glasses.] There's nothing they could do about it. Just something with my brain. [wow] Is nothing to do with my glasses. Because I had a cornea transplant. Nothing to do. I feel. Ain't nothing to do with the glasses or anything. I have like four pairs of glasses. I get them free because I get injured at my job. [Interviewer: Wow. That must be very frustrating.] So as I said, I will be reading for a little while and then I'll start making mistakes on the words and things so I have to be careful. [Interviewer: That must be frustrating] Sometimes I think reading not white, but reading different color paper I think I actually read better than I do with white. [Interviewer: Yeah? That's good to know] For some reason, the white paper, if I reading on colored paper I could go on longer, but I read in white, I like I you know get kind of spaced off. [Interviewer: The contrast is hard then. Hm.] It's not bad, I just stop, give it a minute, but sometimes I just go on talk about it. [Interviewer: It might be worth mentioning to your tutor.] You know if you never brought it up I will never, I will stop and I will begin making mistakes and I say, ok give me a minute. Or then I'll say, ok, I'm going to the bathroom I'll come back. When I reach the bathroom I just kind of just… [Interviewer, after pause: It sounds like you reset your brain] yeah, reset my brain. Yeah. That's what I did. (S10)

In discussing what occurs during the reading process as well as reflecting on what was thought about or done after reading, the concept of personal performance occurred repeatedly. The sense of pride in the accomplishment occurred in several students. For example in answering the question "What are you thinking about when you are reading?" responses included, "Thinking well, I can read better" (S12) and "Um, happy. I'm glad I read the book." (S4) Additionally, S11 said, "I think that it is great for me to finish up and learn to read and I can do. Right now on letters different people. But they don't come to make sense. I'm working on it." S2 expressed pride, but also jumped into the frustration aspects of the times when performance was not good.

Well like when I'm reading and I'm reading it pretty good and I know most of these words, I'm thinking, "I'm learning how to read! I know most of these words here." [Interviewer: So you're pretty proud of yourself?] Yeah. I be proud of myself cause because I been… I had a story and I remember I had a deer got it. It's about 2 page. And I can read that whole two page. But I can come in here and read the same story and I miss

it. [Interviewer: How did you know you missed it?] I don't know. See…[Interviewer: What clues? How did you know you missed it?] I would miss a whole lot of words. I would look at a word and it would be mushroom you know and I got story (?) at it I just read a story. When I read the same story, I got that story at home. And when I come here and I read the same story. I look for… I'm gonna get nervous or something. And I miss 25 words. If I read the same story. If I get by myself, and read it by myself just calm. You know. (S2)

Similar to the answers of what was occurring during the reading process, the sense of accomplishment was a dominant theme in what occurred after the reading of a passage. Nine people mentioned feeling good, saying things like, "Hmmmm. Feels good. It feels really good," (S8) and "I think….that um…..I think about how I did. How I read. I did good reading. Looking [sic] confidence in yourself," (S10) and "If I read this now, I read this now I say to "Humph. I read that and no help. Nobody helped me read that." (S2) The joy of accomplishment brings pleasure to the learners. For example, "I feel good. Hee heee hheee. (laughs)"(S4) and

I be proud of myself. I be so proud…I be yelling and I clap like a little baby. I do I get up there sometimes like a little baby. Oh my God. Look what I did! And then they look at me and say, "You see?" (P10)

The exact phrase "proud of myself" came up in three of the responses. Two students spoke about relaxing when they were done reading.

One student had an awareness of not being satisfied when there was no understanding: "Sometimes I feel like it don't satisfy me. So sometimes I go over it again until it's perfect." (S11)

Even though many students mentioned pride in their success on completing a passage, one student focused on frustration in his response like the dissatisfied student:

Sometimes I read something I no understand what it says. And sometime I do understand what it says. So. [Interviewer: So what do you do when you don't understand what it says?] Sometime…. eh… sometime I ah….I don't understand what it says, I just put the book down. Its just like like I just don't want to be bothered with it. You know like, like,

you want to understand what it says but you don't understand what it says and you just kind of you know you just kind of make sense, and you get upset with yourself. You know. Depressed. Depressed. It does make you get really depressed. Like when you find you read something and you don't understand it says and you …you reading a sentence and like four of the words you know, and then you're going along…O.K. and after a while you don't understand what it says. And then you get depressed. I don't know if other people do. But I believe the majority of people can't read when they try to read and they get depressed. And that's the reason why that's like, eh….they don't want to read, don't want to try hard enough. I try hard, and I just don't get it. And it really depresses. (S7)

This sense of discouragement was mentioned by several other students in the course of

the interviews. P14 is a strong example:

You know…all my life I ain't never learned how to read or write. I been illiteracy all my life, know what I'm saying, and I have to ask people to fill out applications when I used to work and all this help me with this, help me with that. I didn't feel bad cause I couldn't read or write.. it's just you know, I didn't feel that good about myself, neither you know cause I'm a grown man, and this grown man over here and they got little kids comin say, "Can you help me with my homework?" and I used go, to say well, go have your mother to help you cause I didn't want to tell her well I got the same problem cause you got a 9 and 8 year old girl comin and askin you help me with a problem. You can't read so how you gonna help 'em? You know what I mean? And that make you feel down a little bit too, you know? I used to always tell 'em go see, let your mother help you. [hm] Their mother knew that I couldn't read or write but she never said nothing to them about it, you know? Never told em about it that I got that problem you know? (P14)

Even though discouragement was included in his response, the sense of determination

was strong in this student:

I just kept going I kept trying and trying. And I end up getting it. And eventually it came to me. It took me a long time but I ended up getting it. I see. It took me for years. When I was a kid I could never read. I didn't start reading until I was like forty-something. [really?] I was in my 40s when I started and then I wasn't reading. I was reading baby words like cat and stuff like that. I couldn't ever read cat and stuff when I come here. Being stuff. I couldn't do none of that. They got my records. They'll tell you. You. I couldn't do nothing. Have patience with him. He's a slow learner. But I just kept going. That's how I learned. I wouldn't give up. I wouldn't give up. I just kept going and going. And then like when I was at home, I wasn't going to school or nothing, but I'd always grab a book and always try to look. You know what I mean? I didn't know what the words meant, but I always be trying to you know, trying learn it… (P14)

This determination is repeated in S12: "I want to read so bad. I be trying to force myself and shouldn't be upset but be relaxing and let it flow," and in the words of P9: "I work on it hard now. Like I want to learn how to read and I can read like I say, I can read mostly everything, but it's those big words I don't understand."

Nine students consider the information in the passage when they are done reading. Curiously, five of these students repeated this question before answering. "What I think about? If I understand." (P9) and "What do I think about? The Sentence. [Interviewer: What do you mean?] What they said it was all about" (P7) and "What do I think about? About what I just read. Knowing what it's trying to say. [Interviewer: What else?] Nothing, really." (P2) One interviewee would decide the validity of the story, "If it really happened. Is it fake or real." (P16) and another evaluated personal enjoyment of the story: "Um….mmm. I turn the page. I change the page. [Interviewer: What are you thinking about when you're reading it?] I'm thinking about it was a good story and stuff. A good story." (S3) One student reflected on the reading for later use:

> I meditate on it, [Interviewer: What do you mean?] Allow my mind to go over what I'm reading. I try to get it verbatim so that it can be, later on when I need to use it, I have it to use it as a tool. (P5)

To summarize, the new readers interviewed relied on the title, pictures in the story and awareness of the words to determine if they understood what they had been reading. Some thought about the content of the information, and two even made personal application. Rather than reflecting on the material when they had completed reading, many students focused on the accomplishment of completion, expressing feelings of pride in their success or frustration in not understanding.

Question Four: Metacognitive Processes During Successful Tasks

The next section examines the interviewees' perceptions of their metacognitive processes during tasks they considered themselves to be experts in. The research question is, "What are some of the metacognitive processes used by NSE adult beginning readers during complex, non-reading tasks in which the subject perceives him or herself to have strength, talent or expertise?" The interview questions used to discuss this topic were the first four questions in the interview, and were designed to allow the interviewee to become comfortable discussing him or herself. Questions were:

1. Tell me about something you do really well; a strength you have; perhaps you might even consider yourself an expert in this.

2. How did you learn how to do [skill described in earlier question]?

3. What are you thinking about when you do this?

4. How do you figure out a problem when you are doing [skill described in earlier question]?

Responses for the area of skill/strength/expertise fell into several category clusters: tasks that required working with their hands (9/28), working with people, including children (8/28); athletics (7/28), arts, including drawing and music (2/28). One student responded math. These categories are shown in Table 21. Often students expected that their answer should have something to do with their schooling, but that was clarified and additional information was probed for when that answer was given. Only one student had difficulty coming up with something he was good at.

Table 21

Interviewee Strength/Expertise, Categorized

Interviewee	Skill	People	Hands	Athletics	Art	Other
S1	Being a friend	X				
S2	Cooking Italian food		X			
S3	Playing video games		X			
S4	Shark fishing		X			
S7	Welding		X			
S8	Caring for people	X				
S9	Fixing radiators		X			
S10	Helping children	X				
S11	Plumbing		X			
S12	Wash/Wax/Clean cars		X			
S13	Solving people's problems	X				
S14	Talking with people	X				
P1	Sports- football, basketball			X		
P2	Lifting weights			X		
P3	Working out			X		
P4	Odd jobs, landscaping		X			
P5	Giving biblical advice	X				
P6	Boxing			X		
P7	Football			X		
P8	Helping others	X				
P9	Basketball			X		
P10	Math					X
P11	Lifting weights			X		
P12	Music				X	
P13	Staying out of trouble	X				
P14	Drawing				X	
P15	Computer networking		X			
P16	Hanging out	X				
	Totals, by percent	33%	30%	26%	7%	4%

Interviewees gained their areas of strength/expertise by either being in the situation, learning it from someone else, perhaps a family member, friend, or schooling; and in the case of both arts related answers, it was perceived as a natural ability. The concept of "just knowing how" was mentioned several times. For example, "My sister told me how to do it. The video games. I just know it." (S3) The artist (P14) and musician (P12) also made this observation about natural ability, as shown below.

> I just sat there and draw it out; watched tv and watched cartoons and started take a pencil and paper and just drawing. That's all. Just doing it. coming out all messed up and then after that I started takin books and openin up and find cartoon characters and just draw 'em. You know what I'm sayin? Just keep on going and goin then I started getting good at it. I used to draw so much with a pencil, you know I'd just get good at it then. (P14)

> I just learned it on my own. I started singing one day and everybody was like "Yo." I sound just like a radio man. It like "that's nice." I said " Yeah I know." You just hear it from people and they encourage you. (P12)

The concept of natural ability was also mentioned by the expert in cleaning cars (S12):

> Well, it just come naturally. My uncle and them they were doing it for years and I watch them do it and as I grew it just grow me. And I like to; I always like doing it…just to be cleaning cars. (S12)

When asked what they were thinking about during their expert activity, most individuals responded that they were thinking about the task when it was an athletic or hands on task. The people-centered individuals were focused on the problem or the other person. Several mentioned relaxation and fun in their responses: "Um…thinking about um how much fun. Yeah." (S3) "Relaxing."(S4) The singer mentioned being in a state similar to Csikszentmihalyi's (1991) flow state. Csikszentmihalyi studied experts in a variety of fields, including performers and artists, and during their practice of the activity, they get lost in the activity itself and become unaware of

their surroundings or passing of time. For example: "I'm not thinking about anything. I just go."

[lifting weights]. Additionally:

> What I'm thinking about? When you do that? You're really not feeling nothing when you sing. You feel just happy. It's like you love yourself of what you been doing. What you didn't even realize what you can do. I was always a loser all my life anyways. I always listen to a lot of music.

> Another common theme of thinking was improving performance, and this touched on all

areas, as shown in the Table 22:

Table 22

Metacognitive Thinking About Performance During Strength/Expert Activity

Student	Area	Comment
P11	Lifting weights	How to lift as much as I can. What I can lift or not.
S12	Cleaning cars	Ah, thinking about how I can make it look better, how I can make it be better than what it was. Make it look like it was new again.
P9	Playing basketball	I like to be the best player on the court….to score make the points.
P14	Drawing	Figure how to get it right. You know, that, that looks all right. Cause a lot of people have to draw lines and numbers to sketch it out [indicated grids] me, I just don't do that. I just take the paper and just draw it, you know, cause you know, like they say you gotta imagine things to make it come fit this right on the paper, and….not me. I just take the paper and just sit there and put the book in front of me and like I was just drawing before I came down here. Just sit there and look at it and I just sketch it right out. You know?
S2	Cooking	Well, I think about how can you make it look better? Can you add anything in it with it? You know. How can you make it a little better. I put a little meat in it sometimes. You know. You cook up the hamburg, put some hamburg in it, you put ham with it. Sausage yup.

When asked about dealing with a problem during their strength/expertise activity, most of

the interviewees talked about analyzing the issue. The following examples come from people-

centric as well as athletic perspectives. For example, "Go by the information that's given to you.

See that it all plays out. You know the answer to the problem. Look for the information." (P13)

S12 and S14, using their people skills, examined the problem from the perspective of the other

person:

> How do I figure out a problem? That's something. Well just probably 'laxing and looking
> at the problem from all sides. Just don't look at it from one side. Look at it from, you
> know this person's side, or look at if from the other person's side, then looking at it from
> my side figuring how I feel about it and what is the right thing to do with it. (S12)

> I figure I look and see what the problem, where a girl or a guy comes from. If they want
> to live out on the street, that's their business. They want to drag and wear all kinds of
> clothes, that's their business. That's what a certain guy said to me. He said, "You never
> bring us down." I said, "Why should I?" I says, "You gotta do for yourself." (S14)

Even the athlete mentioned thinking about the decision:

> See a man open. Find something to do. Throw the ball. Think about it before you throw
> it. Go by somebody….you get the ball, score the goal, sneak up. You can do what
> everybody else. But you know when you made that score, you got that touchdown, you
> know you got the ball in, you feel happy for yourself and you want to play some more.
> (P1)

> Several spoke of setting the issue aside for a time and returning to it, which was a

strategy mentioned during the reading process when encountering a troubling word or problems

with comprehension. For example,

> Sometimes I have a problem, yes but sometimes I get mad and put it down and come
> back tomorrow. If we have… take it to the boss and tell him what happened and
> sometimes he tell me what to do and get it done. [Interviewer: Does the boss know what
> to do? Do they sometimes bring it to you?] Yes sometimes because I do most fixtures I
> know most fixtures so the whole thing… the basement, the toilet and things mostly new,
> they don't want to do that and I know how to do good. And they push me to do that
> because I know. (S11)

> The student who spoke about drawing (P14) used a similar strategy, and actually

commented on reading issues when probed for additional information:

> If it's not working right, I'll just erase it. I'll try it a couple of times. If I don't get it, I
> know I'm going to get frustrated so I'll put it down. I'll just go and watch TV or
> something, then I'll go back at it later. Then I'll get it. Cause I know once I get frustrated
> [chuckles] I'm not gonna never get it. Cause its you know I don't want to get mad cause
> then I'll left up ripping up the paper and have to start all over so I'll just put it down. I'll

go back later and then it'll come out; I'll get it. I'll go back later and it'll come right out for me. Know what I mean? [That's interesting. It'll come right out for you. Do you do that with other things?] Yeah well, lot of things like my reading and stuff I have problems with. I'll read and I'll get tired and when I get tired I get like frustrated. I ain't doing this no more and I'll get up and walk away. Then later on I'll go back and then I'll get it. Cause I'll say "Oh I can't get it." Then later I'll go back and I'll get the word cause I'll be trying to get the word and I can't get it and oh man I get so mad and I walk away and I'll be thinking about it and when I walk away then when I go back I end up getting it. I don't know. (P14)

In summary, there were four common areas of strengths or expertise among the interviewed population: people strategies, athletic abilities, working with their hands, and artistic ability, including musical abilities. One single person mentioned math. Many learned their skills from someone else, but several viewed their areas of strength/expertise as natural abilities. They are thinking about the activity and improving upon their performance, or enjoying the activity for itself. Problems are solved by setting them aside, and examining the problem from different perspectives.

Question Five: Connections Between Metacognition in Strength/Expertise Area and Reading

The final section examines the potential relationships between the area of expertise and reading, answering the research question, "Are there any relationships between the metacognitive processes of the self-defined strength/expert area and the limited ones of reading?" Question sixteen in the interview "How do you know how to do things that require reading if you can't read the signs or directions?" touches some on this, but it is the actual analysis of the entire data set that reveals any connections. The final question was designed to elicit complex information that might reveal the coping strategies of the student in reading

situations. The following themes of metacognitive strategies emerged in this discussion as illustrated in Table 23.

Table 23
Metacognitive Coping Strategies

Strategy	Number of Responses
Just know	30
Remembering details/ directions	12
Ask for help	10
Looking or observing	2
Connection with other skill / information	1
Just figure it out	1
Listening	1

This final interview question was a combination question, allowing the interviewees to reflect on areas in which they were successful despite their reading issues. The words "I know" and "I just know" occurred frequently. There was also an indication of strong memories for remembering directions. This is surprising because the students frequently addressed their difficulties in remembering words when they were learning them. The strong memory for directions and locations appears to be a different function than learning and remembering words and the rules of reading. Students frequently spoke on the need to ask for help, which is also mentioned as a coping skill for reading.

One student was surprised by the question:

I didn't know you had to read. I didn't know I lived around that kind of environment. You had to like, life is about reading and you have to read to be in it. I never knew that. I

just go by day by day and I never know reading was a thing you had to do to live life. (P1)

Two interviewees compensate for their lack of reading by looking at the pictures; a similar strategy that was mentioned in understanding what the story or passage is about. For example:

> You look at the pictures. Try to figure out what the picture is. If you know what the picture is then you know what to do. If you go to the bathroom, it's not always…if you can't read the sign you know what the picture means. The man here, the woman there. Stuff like that there. One time I had a little picture aside the words. And you know what to do from the pictures. I think that's why they put the pictures there. (laughs) (S12)

The student with experience in plumbing relied on the diagrams:

> Like some of the pictures that come with paperwork. That is when they show you what to use and what not to use. So you just take the diagram out put it down. Like if you're going to put on a faucet. First thing I do is look at it, then put it out and if it looks funny and I look what it says to hold it on the sink first. And I put it on and I look for how to connect it. Because sometimes they have three different ways to connect it and where to put this connection and where to put this connection. Like you know hot is on your right and cold is on your left. You gotta know the cold, cause you gotta put it in the right place on your left. Hot on the right. Cause if you put it on and you turn it and if it comes out the cold side and it's hot you got a problem. How to follow the codes. (S11)

Eight people rely on asking others for help in these situations. This high response rate of asking parallels the asking for assistance in determining words in the reading process.

The strategies of beginning adult readers who have managed to survive indicate strong memories for directions and good coping skills. In both reading and areas of expertise, problems were solved by looking at the situation, asking for help and relying on contextual clues, such at pictures. Evaluation of performance occurred in both areas with reading being feelings of accomplishment or frustration, but in the area of expertise, the analysis of performance was one of ways for improvement.

Just Knowing

All of the interviewees mentioned doing well with directions and finding places, citing

good memories. Some students "just know" things:

> I stand up there and look at them and some of the words and them I don't know what it….If I come anyway and I will know what it says. I will know. You know, I will look at it and I'll know the place that I in and I'll look at the words that it is. Some of the words I will know what it is and some of the words I won't know. But I will go some…anywhere I'll go and I'll meet someone I'll know what it says. I won't know all the words and them, but some of the words what's in-between. I say ok, that's what it says. That's what it means. [Interviewer: So you'll figure it out?] I'll figure it out. Its very easy to figure out what stuff is. As I say, I won't know everything but I will figure out what it says. [Interviewer: So you've managed] yeah. I've been around. I can get around. (S7)

Like the previous quote, P16 also "just knew" and was good at remembering.

> Ask. What do you live, what's the volume (?). [Interviewer: If you had to get somewhere far away. How would you do that?] Call somebody. [Interviewer: You said you were in a bunch of cities. How did you know how to get from city to city?] I just know. Because I went with people and I remember like how to get there and stuff. I remember like what roads to take and like, because they would explain to me the directions and I would take the directions that they told me. [Interviewer: Did you go back again?] What do you mean? [Interviewer: Like you went from Providence to Hartford or whatever directions… did you go back and forth between the cities?] Yeah. [Interviewer: How'd you remember?] I don't know. I just remember. Because like when I was younger, my father would like teach me like how to remember directions and stuff and I don't know how he did it, but if someone like tells you how to get somewhere, then I can go, but if it's like me to explain to someone I won't be able to do it because I'm not good at explaining that type of thing. And stuff. I can just do it. [Interviewer: Do you take the bus or drive?] I take a cab. [Interviewer: Do you have to tell the cab driver what to do?] Yup. [Interviewer: What do you look for?] It all depends on where I'm going. [Interviewer: Do you find that easy?] Sometimes. Sometimes like it's hard for me because I'm ADD so it's like hard for me to explain a lot of stuff. [Interviewer: But you always remember how to get places?] Yes ma'am.

It is curious that the word "know" was a very high frequency word in the frequency

analysis of the question numbers 6-15. Leech's et al. (2001) listing of spoken English ranks

"know" at 31. In 14 of the 16 questions, "know" ranked in the top ten words used. The lowest

rating of "know" in the interview questions on reading was 14th on the question "What is

reading?" Perhaps this is indicative of knowing and reading being the most distant relationship in the minds of the beginning readers. Table 24 indicates the ranking and frequency of "know" in each question.

Table 24
Frequency of the Word "Know" in the Interviews

Question (Order in interview)	Number of Words		Use of "Know"	
	unique	total	ranking	frequency
Tell me about something you do really well; a strength you have; perhaps you might even consider yourself an expert in this. (1)	495	2087	14	25
How did you learn how to do _____? (2)	559	2303	10	34
What are you thinking about when you do this? (3)	501	2103	9	34
How do you figure out a problem when you are doing _____? (4)	943	6510	10	100
What is reading? (5)	489	2370	14	30
Why do people read? (6)	370	1667	8	35
Why are you learning to read? (7)	528	2807	10	39
How does someone learn to read? (8)	454	1729	9	26
How do you know what the words are? (9)	330	1670	6	50
What do you do when you find a word that you don't know? (10)	355	1873	8	44
What do you do/think after you are done reading a passage? (11)	413	1935	9	36
How do you figure out what a story or passage is about? (12)	421	1986	7	43
How do you know if you've understood what you have read? (13)	393	2059	8	43
What are you thinking about when you are reading? (14)	523	2822	7	57
How would you teach someone how to read if you met someone who couldn't read any words at all? (15)	629	4050	7	75
How do you know how to do things that require reading if you can't read the signs or directions? (16)	759	5024	6	119

This analysis reveals that the word "know" was used 790 times in the documented conversations. A further analysis of the use of "know" had a high frequency (186 instances, or 24%) as used in the expression "you know." In colloquial American English, "you know" is used to indicate a pause or asking for agreement or comprehension on the part of the listener ("you

know?"), but there were numerous instances where it was used in other contexts in the remaining

76% of the use. "I know" was used 73 times by 19 different individuals to describe their abilities.

"You know" as used to mean "I understand" or "one understands" for example, "Knowledge.

Right? The more you read the more you know, I guess" (P2) was used 32 times by 13 different

individuals. The sense of "just knowing" occurred in the reading comprehension process as it

"just comes naturally":

> Once you start to reading it, the part you can read, you can almost pull together. You
> know, well I can put it together what the story's about. You know put it together. [How
> do you put it together?] Well, it just come naturally. It just comes. It just comes to you. It
> just comes to me. I say, Well this what this means, and this means this. Yeah. While you
> sitting there you think when you can picture it in your mind what the story's all about.
> Well I can. Put it that way. (S12)

Perhaps this sense of knowing is reflected in some of the unique phrases used by the

students around the reading process. There is a sense of reading being something that happens in

the head, as if it is something that is caught. Interviewees used phrases like "got used to the

words" (P12) "filling up the head" (P4), the "mind stays locked" (P6) and "keeping it in my head

(S12). This may provide some explanation for how these learners are processing information and

how new information and skills are learned. Table 25 identifies these unique phrases and

presents them italicized in context. There are some unique perceptions in these words that may

lend insight into these learners.

Table 25
Unique Beginning Reader Phrases

Phrase	Quote	Student
Got used to words	"That's how I got used to the words on this page."	P12
Need to see words (in head)	Like, you know, I always see them words [good] but I'm saying like, if I don't see em I can't write em….	P14
Flashes in my head	But, you know, I see em, it flashes right up, boom. That's you know I mean That's how it is with me. I don't know how other people do it, but with me, that's it. It flashes in my head….and then I try to recognize it and remember what it is in case I need it again so I don't have to go through that again. I try, but sometime I have to go through it. Words over and over and notes flashing in my head and then I read. I had to keep the same words month after month same words over and over in my head. Same book. Same book. You know. Every time I try to go more, no, you're not ready for that. Same book. Nope. You're not ready for it. I know when you're ready, so hey. The more I looked at it, the more I seen it the more it kept flashing like a flashback in my head and then now I got to see the words so I know what they are. I mean I know what they are. So I can look anywhere and if I see the word, "Oh I know what that is." As I said, my words, certain words I just don't, I'm not, I'm not clickin to em yet. [yet] But I fancy they should it come to me.	P14
Filling it up (the head)	I mean me and myself when I try to get my license I had to study the manual book. Words like that I would know. Do not walk, school zone you stop. I had to learn those things. I needed help and then I just started filling it up. Cause each time I saw that word I would know what it means. It wasn't that easy but I just had to work on it work on it work on it. That's the only way I would know. Go with it.	P4
Keep it in my head	And my son come down here. He be helping me out and stuff. Dad, you know what that word is. Yeah. (laughs) We just said that word. Can't make it. I forgot the word. That's that. And you just keep doing it over and over until you can keep it in your head. And some words I have no problems with; and some words I do. And some words I have no problem	S12
Doors won't open, mind stays locked	Sometimes I blank out when I focus on the story. The doors won't open if I'm not interested. My mind stayed locked. I blank out.	P6
Pressing on my mind, open your mind	It's just inside of you; something inside of you if you know if you understand it or you didn't. and if you didn't understand, you gonna, it's always gonna be pressing on your mind. Like I wonder what did that mean…what did that mean? What did that mean? If you understood it you open your mind, it's not gonna question you like that. Of course mine did (laughs) [so your mind questions you?] Yeah. One thing I don't understand. Go ask someone. You know. If you, what does this, what does that mean?	S12

Summary

This chapter examined the responses of the interviews of NSE beginning readers. The analysis was looking for metacognitive themes in reading and in areas of expertise. Student answers are mixed regarding reading comprehension. They do not describe reading as processing information for understanding. While the students talk about process tasks in describing reading, there is some level of analysis of the information for comprehension when probed for understanding. Some rely on others to determine if they have understood. NSE beginning readers define the reading process as a set of skills that they do not have that they would like to gain to better themselves. Unlike experienced readers, reading is not about meaning making.

In both reading and areas of expertise, interviewees evaluate their performance. Problems are solved by setting them aside and returning to them, or analyzing the information at hand.

The final chapter will discuss implications and application of these findings.

CHAPTER 5.
SUMMARY, DISCUSSION AND RECOMMENDATIONS

This section will review the study and its outcomes and explore recommendations for current educators of NSE adult beginning readers as well as explore opportunities for additional research.

Summary

Metacognition provides insights into the internal processing of information within an individual. Numerous studies around metacognition and reading have demonstrated that the metacognitive thinking during reading reveals an individual's knowledge of the reading process (Atkinson et al., 2002; N. D. Collins, 1994; V. L. Collins et al., 1996; Cromley, 2005; Downing, 1969; Garner, 1988; Hartman, 2001; Kirby & Moore, 1987; O'Sullivan & Joy, 1994; S. G. Paris & A. D. Parecki, 1993). In examining adult literacy students, metacognitive descriptions can provide insight into limitations and errors within understanding of the steps to reading comprehension.

The literature review included education and psychology journals, published books on metacognition and adult literacy, education reports as well as a the 1992 National Adult Literacy Survey (NALS) and the and the preliminary results reported from the 2003 National Assessment of Adult Literacy (NAAL). It also explored discussions on the listservs from the National Institute for Literacy (NIFL) and the Adult Literacy and Education Wiki to provide the most current perspective from practitioners.

Using a phenomenological approach, the researcher interviewed thirty native English speaking low-literacy adult learners in order to uncover the metacognitive processes of their

thinking during reading. Several gaps were revealed in the data, indicative of the learners'

limited performance.

Additionally, the researcher explored the metacognitive understanding of the individual

learners during tasks in which they perceive themselves to have a strength or to be experts. It was

hoped that some of the problem-solving strategies present in these tasks could be leveraged in

assisting the reading process.

Discussion of Results

This study was intended to explore possible answers to the following five questions:

1. How do NSE adult beginning readers define the reading process?

2. What metacognitive processes do NSE adult beginning readers use during decoding?

3. What are the metacognitive processes used by NSE adult beginning readers during

   the meaning-making of reading text?

4. What are some of the metacognitive processes used by NSE adult beginning readers

   during complex, non-reading tasks in which the subject perceives him or herself to

   have strength, talent or expertise?

5. Are there any relationships between the metacognitive processes of the self-defined

   strength/expert area and the limited ones of reading?

Each will be considered in turn in this discussion.

Question One: How do NSE adult beginning readers define the reading process?

Reading Processes in the Beginning Reader. Beginning adult readers generally see the

reading process as being able to say the words right, just like the low comprehending children in

Myers and Paris' (1978) study. It is not about understanding the passage, but successfully

reading the words in it. At that point, there is often a sense of pride in the task of completion. Nine students specifically mentioned feeling proud of themselves when they were done reading a passage. As measures of understanding, two students mentioned knowing the words and four spoke about it "sounding right" when it was read. Comprehension was determined by looking at the pictures or the title (12 students), visualizing the story (4), "by reading it" which seems to be indicative of completing saying all of the words, (4), asking questions (2) as well as knowing the words (2). When asked how they would measure comprehension, they determined the benchmark of success if it makes sense (7), can discuss the passage with teacher or others (4) could say all the words or it "sounds good" (4) and two said they generally don't understand the passage. In most of these responses, comprehension was not coming from understanding what the words were trying to communicate. Visualizing the story is the closest response to internalizing the information, although "makes sense" may also be in alignment. Unlike successful readers, who will reflect on the passage while they are reading or at the end of a segment; or ask questions to review the passage to assess understanding, beginning readers repeat and reread, feel proud, evaluate their performance, relax, write about the passage, or discuss it with someone. Only two mentioned assessing their understanding and five mentioned reflecting on the information in the passage, which would be considered metacognitive skills around comprehension.

External Locus of Control. There is an external locus of control around the reading process in these beginning readers. When poorer adult readers need assistance with comprehension, they often refer to an external source, usually another person rather than re-referencing the text to find the information (Gambrell & Heathington, 1981). This was seen in

the adult readers as they repeatedly commented about asking someone for help as a first step in

dealing with an unknown word, as well in reliance on the teacher to determine if they understood

the passage. One student mentioned reading and then the need to reread with the teacher. While

rereading may be a metacognitive strategy used by skilled readers to locate missed information,

beginning readers see it as just another step in the process providing additional practice. They are

not rereading to "debug" (Brown, 1984) a comprehension problem. The external locus of control

is also evident in the need to discuss the story with the teacher to determine if they understood

the passage or not. Perhaps the scaffolding of teacher assistance may need to be gently removed

for many of the learners to encourage the zone of proximal development moving from stage one

to two (NCREL, 2004) and encourage more independence. Potentially this sense of

independence can be encouraged and developed, which will also feed into the self-efficacy,

another area that may be problematic for the students.

Acknowledging the Reading Problem and Working to Correct It. Low literacy NSE

readers acknowledge that reading is difficult for them. Many of the students in this study judged

themselves as poor readers, as well as assessing their strengths and weaknesses. This sample

population reported the same difficulties with reading in school as was found in the Davidson

and Strucker (2002) and Greenberg, Ehri and Perin (1997) studies mentioned in the literature

review. This information was unsolicited and revealed in the course of conversation by thirteen

of the interviewees. These students are well aware of their prior reading histories and past

failures. In these discussions, they were also able to explain some of their reading issues, which

were also mentioned unsolicited in the course of conversation. These may or may not be accurate

pictures of the students' abilities, and may also be the reiteration of something a teacher may have told them.

Bandura's (1989) discussion on self-efficacy has applicability to these learners. As previously cited, "Those who judge themselves as inefficacious are more inclined to visualize failure scenarios and to dwell on how things will go wrong. Such inefficacious thinking weakens motivation and undermines performance" (p. 729). If self-efficacy issues are clouding the perceptions, a frank discussion with the teacher might provide a clearer picture of the student's abilities. There also might be some enlightenment for the teacher regarding past issues in the student's schooling. An individual conference about the reading process and the student's perception of how things are going is another step of looking from a different perspective, similar to the way metacognitive skills drive the reading process. This helps the student verbalize about personal progress and challenges and offers an opportunity to speak out on topics that may not arise unsolicited in the classroom work.

Stanfel (1996) commented, "Until individuals admit they have a reading problem that affects their quality of life and that assistance is needed, improvement is impossible" (1996, p. 166). S8 commented almost in these exact words the need to recognize the problem in order to learn to read.

> By admitting you got a problem. You gotta admin you got a problem first. Cause it took me a long time to even say I had a problem. "Oh, I don't have a problem. No." [then what?] Then once you walk through that door and say you can't read and you want to learn how to read, you done it. Cause that door gotta open. You gotta open that door. (S8)

The 31 references to reading being needed for advancement throughout the interview process is indicative of the strong realization in the sample of the key factor that reading is necessary, and

without reading, their quality of life has been impacted. Five students commented about thinking

about how they are improving themselves and their performance as they read. This is a strong

goal in the minds of the learners.

Question Two: What metacognitive processes do NSE adult beginning readers use during

decoding?

The discrete, cognitive skills mentioned by the students for decoding included: asking

someone for help with the word, breaking down the word, looking in the dictionary, sounding

out the words, skipping it, having someone show or teach them the word, determining it from

context, marking as unknown then coming back to it, looking for similar words, studying and

learning it, automatic recognition, and the belief that the book has the words. They knew that in

order to teach someone how to read, they would need to teach him or her the alphabet, sounds,

and beginning words. The students have the know-how of certain skills for the decoding process,

even if they are at a beginning level. They are aware that these skills are connected to the reading

process and in general, can explain how to do them.

Decoding is the area of focus for these readers, rather than understanding what is read.

There is a need to shift the emphasis from identifying the words to identifying the meaning of the

stories.

Question Three: What are the metacognitive processes used by NSE adult beginning readers

during the meaning-making of reading text?

Comprehension monitoring appears to be occurring somewhat in some of the beginning

readers. In the literature, metacognitive processes incorporate something about the selection of a

strategy then the assessing of its effectiveness. The beginning readers have extremely limited

strategies in place, as were described in their narratives. The focus is mainly on decoding. Some did not know how they understood, yet they understood when they did not understand. In most students, there is no sense of recognizing that something has gone wrong during the reading process. They do not notice when they do not understand and do not use pre- and post reading strategies such as prediction, question generation, and summarizing. They are unaware that there are skills available to help rectify the problem. There was an awareness about needing to reread if they didn't understand, but this is the only strategy used by the students. It is as if it is an all or nothing process rather than understanding a portion and looking to fill in the gaps. Cromley's research (2005) noted this same pattern, commenting that those adults with poor reading comprehension show the least evidence of monitoring. Perhaps a higher level thinking process discussion should occur about the selection and use of specific strategies taught and modeled to equip the students with some of these comprehension monitoring skills. Perhaps the patterning of the teacher in a think aloud process can help teach the students these skills and strategies. Letting the students see them modeled and practiced will help them incorporate them into their own reading processes.

As cited in chapter two, strategies that good readers use include recognizing implicit ideas in a text; and to aid faltering comprehension, strategies include searches for the source of the difficulty, rereading passages, self questioning and incorporating compensatory strategies such as backward and forward searches (Loxterman et al., 1994). As demonstrated in the interviews, struggling readers only use rereading. These readers do not realize that they have not understood what they have read and are not aware that these methods would help them. They do

have some concept that the title and pictures will help determine what a story is about. Perhaps this information can be leveraged in a pre-reading, predictive strategy as the story is discussed.

Metacomprehension is a function of the available working memory. There is more mental space needed to do the task and to think about it (Kirby & Moore, 1987). It is important to realize the limited capacity of the NSE beginning reader during the reading process. His or her mental functioning of working memory is wholly dedicated to decoding during reading. There are words that begin to become recognized with regular use and transition to sight words. As automaticity of words and skills begin to form, the learner can be instructed to focus on the comprehension aspects of the process as well as decoding. This step appears to be omitted in early reading instruction. Teachers must be explicit in discussing comprehension and understanding, rather than just asking questions about the passage to ensure comprehension. Students need to learn to paraphrase and summarize information even in simple stories.

Students need to be taught strategies for reading, as well as task variables of decoding. Strategy variables would involve the choices to look at headings, charts, and self-questioning during the reading process as well as summarizing and paraphrasing.

Anderson (2002) speaks of attended thinking as part of metacognition. These skills are not used at all by the beginning readers, and would be helpful to be taught to them. They include:

1. Preparing and planning for learning

2. Selecting and using learning strategies

3. Monitoring strategy use

4. Orchestrating various strategies

5. Evaluating strategy use and learning

These skills would help the new readers begin to take a higher order thinking process approach to reading and create transference to an internal locus of control in the reading process. A discussion around why the student is reading, what he or she expects to find in the story, and being cognizant of comprehension during reading sets the stage for comprehension, then discussing how well the strategies worked allow for thinking about the thinking occurring during reading.

Question Four: What are some of the metacognitive processes used by NSE adult beginning readers during complex, non-reading tasks in which the subject perceives him or herself to have strength, talent or expertise?

NSE Beginning Readers Demonstrate Expertise. The way the learners described their non-reading areas of expertise support expert theory in the way they handle them. Table 26 shows some of the supporting quotes from the interviews and the expert theory factor they support.

Table 26

Quotes from Participants Demonstrating Processes Supporting Expert Theory

Expert Theory	NSE Expertise Demonstrated
Experts know what to notice in a problem	See a man open. Find something to do. Throw the ball. Think about it before you throw it. Go by somebody….you get the ball, score the goal, sneak up.
Experts have many strategies, which they know exactly when to use.	Like some of the pictures that come with paperwork. That is when they show you what to use and what not to use. So you just take the diagram out put it down. Like if you're going to put on a faucet. First thing I do is look at it, then put it out and if it looks funny and I look what it says to hold it on the sink first. And I put it on and I look for how to connect it. Because sometimes they have three different ways to connect it and where to put this connection and where to put this connection. Like you know hot is on your right and cold is on your left. You gotta know the cold, cause you gotta put it in the right place on your left. Hot on the right. Cause if you put it on and you turn it and if it comes out the cold side and it's hot you got a problem. How to follow the codes.
Experts have practiced their basic skills so much that they are automatic.	"I'm not thinking about anything. I just go." [lifting weights] Several mentioned relaxation and fun in their responses: "Um…thinking about um how much fun. Yeah." (S3) "Relaxing."(S4) What I'm thinking about? When you do that? You're really not feeling nothing when you sing. You feel just happy. It's like you love yourself of what you been doing. What you didn't even realize what you can do.
Experts are very aware of their own thinking—they know when they don't know.	If it's not working right, I'll just erase it. I'll try it a couple of times. If I don't get it, I know I'm going to get frustrated so I'll put it down. I'll just go and watch TV or something, then I'll go back at it later. Sometimes I have a problem, yes but sometimes I get mad and put it down and come back tomorrow.
People become expert by observing experts, learning strategies and facts for specific subjects, solving problems, getting feedback, and talking about why things are the way they are.	I learned thru my mother and my father and from my family. We always help each other. I learned from back in Jamaica we got all things. We got plumber out there. We get to learn it and then you come from here and develop here and its more and you understand it. Well, I worked in a restaurant up at home. When I was down south and I worked there like five years and I learned it. An Italian restaurant. [best dish?] Lasagna [what's in it?] Well we put rigatonis, meppes, cheese, and different red cheese not pepper, oregano. Put a little sugar in the tomatoes so it won't be all bitter. Is bitter right? (unsure of word) Yeah. Let's see. Come out pretty good.

Expertise in New Readers. The skills of the new readers included people skills, working with their hands, arts and athletics. Metacognitively, they used problem solving techniques, a focus on continuing improvement, and choosing to examine things from a variety of angles.

They have developed a variety of coping skills that they use to function in society that involve

metacognitive processes. These skills and processes parallel many of the strategies used in

reading, and have the potential to be leveraged to help with the reading process. They are not

occurring naturally in the reading process, and there is very little transference of skills that could

aid reading skill development and comprehension.

Experts handle things differently than beginners. Good readers begin to incorporate the

problem solving and analysis skills in their reading through the use of metacognitive decision-

making. Adult literacy teachers can help the students see how these skills could be useful in the

reading process a described below.

Question Five: Are there any relationships between the metacognitive processes of the

strength/expert area and the limited ones of reading?

   A Different Way of Knowing.   The NSE learners have a unique way of processing

information. S2 discussed the unique way of knowing of the beginning reader, saying "they got

their own mind":

> See like people who, I don't know how you say it, but like, people who can't read, they
> got their own, they got their own mind. They can't read…. There's different ways how
> people who can't read does things. It makes you think he can read. You can do this, do
> that. But once you get in talk to him, maybe a week, a couple days you can really find out
> what can he do. (S2)

   Drago-Severson (2004) discusses a learner's "way of knowing" as "an internally

consistent meaning-making system [used] to make sense of, or interpret, our experience" (p. 5).

She also says that "informational learning—new skills and information—adds to *what* a person

knows, whereas transformational learning changes *how* a person knows (p. 19, emphasis in

original). Potentially the beginning readers' learning of skills was only beginning to impact how they know.

Drago-Severson (2004) further elaborates on the changing processes of an adult's way of knowing:

> [T]hese kinds of growth processes are gradual and progressive (they occur step-by-step). Moreover, they occur in the direction of greater complexity—that is adults evolve gradually from a simpler way of knowing to another, more complex way of knowing, and they do so at their own pace, depending on the supports and challenges provided by the environment….Regardless of the way that a person is making sense of experience, the self strives to make itself cohere; it organizes experiences in ways that are reflective of its meaning-making system. This coherence is preserved until the self is no longer able to incorporate new experiences in to the existing meaning-making system. This is the point at which the subject-object balance is gradually renegotiated and a new, more complex subject-object balance evolves. Transition from one developmental stage or level to another is an incremental progression of increasing complexity. (pp. 21-22)

The beginning readers' sense of understanding about reading is very basic, looking to get information or knowledge into their heads. There is an awareness of the need for the mind to change to do this. The unique phrases documented in chapter four included needing to see words (in head), words flashing in the head, getting used to words, but also included filling [the head] up, keeping words in the head, and the need to grow the mind with increasing knowledge using comments like the doors won't open, my mind stays locked, and information is pressing on the mind, and the need to open the mind.

Their ways of knowing how to do the things they consider themselves strongest in is either a natural ability or something they learned. The skills that the students consider themselves to be experts in are mainly right-brained abilities. Reading is a very task oriented, left-brained skill. Perhaps there is some potential in further examining right-brained methods of teaching based on the learners' seeming dominance in this area.

Processing Issues. If the work of Howard Gardner (1983, 1993, 2003) and his thinking on multiple intelligences is considered, it may be that the low-literacy learner has a decided weakness in the areas impacted by linguistic intelligence and strong dominance in one of the other areas. The strengths of all of the interviewees in this study fell in areas other than those of linguistic intelligence. While they may be able to communicate well, indicative of interpersonal intelligence strengths, the verbal language of all of the students interviewed was a variation of non-standard English, peppered with a great deal of slang. These dialects are common in the less-educated sectors. This creates a unique question: Is this an indicator of a problem or reflective of limited education? If linguistic intelligence is limited, and students are processing information differently as a result, perhaps there is a need for another approach to reading. In his book Frames of Mind, Gardner (1983) suggests considering alternative methods of teaching reading using pictorial systems, such as represented in the Chinese use of characters, rather than the phonological systems used for reading in the West. He proposes that an alternative route be exploited when one area isn't working (p. 88). Potentially this would offer a different methodology for the struggling reader, many who found the visual cues a significant help with comprehension in this study.

Thompkins and Binders's (2003) study discussed short term memory issues in struggling readers. Perhaps the students in this study and their uncanny memory for recalling directions and being able to navigate to places is a function of long-term memory, and their inability to recall words is indicative of this short-term memory deficit. Perhaps it is a compensatory skill, such as the heightened awareness of hearing in a blind person. Certainly, the issues of working memory

overload common to new readers can explain the difficulties they have in recalling and comprehending what they have read because of the extreme efforts required for decoding.

Listening comprehension is cited in the literature review as indicative of learning disabilities. Many of the interviewees repeated each question from the interview as a preface to answering, almost as if they were thinking as they repeated the words, or telling themselves the question. Perhaps this is representative of listening comprehension issues or is a connection with the short-term memory limitations or even the need to hear in their own words to understand. Potentially these memory-processing areas are indicative of learning disabilities in the way these readers process information.

Cognition and Metacognition Working Together. Schraw (1998) sees cognition and metacognition as two of three steps in a constructivist mental development model progressing to higher order thinking. At the Cognitive Level (Level One), there is domain-specific knowledge and strategies with limited transfer to other domains. Level Two is the Metacognitive Level, where information becomes domain-general, self-regulatory knowledge and there is some cross-domain transfer. Here, construction of metacognitive knowledge comes from reflection and interaction with peers. At the final level, the Conceptual Level, individuals have mental models of a phenomenon, where learning is guided by personal theories. At the conceptual level, there is broad transfer between domains, and continuous testing and revision of mental models. At this level, reflection on the information is crucial to knowledge construction. The NSE beginning readers' way of knowing is a cognitive perspective according to the results of the interviews in this study. They are domain specific, focused on the discrete cognitive skills of decoding. In order to transition to level two, discussions need to occur around the metacognitive thinking

skills. Potentially, discussions leveraging the skills they are good at and how they think and process information during those activities can help them see how they can view reading in a new light. As the learners discuss their skills with peers and reflect on their learning, they can begin to develop conceptual models, moving to the next level, and begin to use reading to learn and leap over the stumbling block keeping them at the plateau of developmental reading in the second or third grade level and build a bridge to higher order thinking skills.

The NSE students are skilled in areas other than reading. What would it take to leverage some of the thinking that occurs in these areas of expertise? The question brought up in the chapter two from National Science Foundation report on Transfer of Learning (Mestre, 2002) is particularly important to this discussion. The question asked, "What are the cues and strategies that can be used to trigger appropriate knowledge to be applied in a particular situation?" (p. 9). This question acknowledges that the learner often has the relevant knowledge in a transfer situation but fails to use it. Is this an area of awareness? Would discussing the strategies with the student to identify them bring them out into the open to provide the student with a broader repertoire of reading tactics?

These learners have a variety of coping skills that would be useful in reading. In their areas of expertise, they are looking for improvement in their skills or better solutions. They analyze problems from a variety of angles to determine what to do. They know to set aside tasks when they are frustrated and return to them, allowing the subconscious to process. These are all metacognitive skills that would have applicability in the reading process if they could be deliberately applied to it.

Is it as simple as asking the athlete about practicing for skill development and looking for a parallel to reading? Reading takes much practice to become proficient. Is it working with the diagrams that the skilled laborer uses and is familiar with and creating reading materials that function in a diagrammatic way, such as graphic organizers? A simple suggestion is to work with what is known from the student and developing materials that appeal to the familiar areas. Time and budgetary constraints make this difficult, however, high interest materials may assist in the transference of skills.

<div align="center">Conclusions</div>

The NSE beginning reader adults in this sample see learning to read as a way to advancement, but see the reading process as effective decoding of words. They do not focus on comprehension of the information they are reading, which may be the limiting factor in their development. These observations are consistent to the population studied with no difference between the incarcerated subjects and those participating in the study from the private programs. The findings were also consistent with the literature review.

Students need to be equipped with metacognitive skills and taught how to approach reading strategically. They need to learn how to self-monitor comprehension and transfer to an internal locus of control, rather than reliance on an outsider for assistance.

The earliest studies on expertise (DeGroot, 1965) reveal that experts and novices notice the same stimulus differently based on the knowledge that the individual brings to the situation. Experts bring different schemas to the situation, and focus on principles and patterns, whereas beginners only examine surface attributes (Bransford et al., 2000). This is significant to realize that the reading teacher will notice different things than the novice readers in the NSE ABE

program. In order to transition to a sense of expertise, beginning readers need to be brought

beyond the surface attributes, or the decoding aspects of reading, and learn to focus on the

principles and patterns, such as would be afforded to them through the use of metacognitive

skills.

Recommendations

General Recommendations

  NSE ABE adults are using many of the same strategies as they work in their personal

areas of strength/expertise that good readers use during reading. They know to analyze a problem

from a variety of angles, yet in reading, the beginning readers only go back and reread the

passage. During reading problems, the students are baffled. They realize that it takes much

practice to improve their expert skills and devote substantial time to practicing. This can be

metaphorically leveraged to the reading process. They analyze what needs to improve in their

expert areas, and work to better their best. Perhaps stepping back to analyze their reading will

assist the process. This form of evaluation can occur with the teacher, and be trained to be self-

directed as it is with the area of expertise. Furthermore, the connections with personally defined

areas of expertise may provide the instructor with a metaphor or paradigm of understanding that

could assist in providing a new way of knowing.

  Adult Basic Education teachers need to help students focus on comprehension of the

passages that they are reading. An awareness that their perceived goal is to successfully read all

of the words may help raise awareness that comprehension is not an understood goal. Assisting

students by providing training in metacognitive strategies can equip the students for better

comprehension.

Adults are aware of their strengths and weaknesses. Teachers can work in partnership

with their students to diagnose issues, pinpoint problems and work on remedial solutions. Adults

also carry significant information about how they do other things successfully that may be

leveraged as metaphors for coaching the reading process. This partnership and discussions with

the students can assist in the transfer of ownership of learning to read becoming the student's job

with the assistance of the teacher. Currently, most believe that it is something that the teacher

shows them how to do. The locus of control is external to the learners, seen as something that

others have that they do not. Discussing the reading process with them as well as their personal

progress should assist the learner in owning the process as well as their progress.

Analysis of the study itself

There were several limitations to the study and its construction. The interview questions

generally hinted at the targeted responses. If it were to be repeated, there needs to be more

specificity to them. It might be effective to create a listing of metacognitive strategies used in

reading and ask yes or no questions of the students regarding their familiarity with them and their

use of them.

The use of a single interview for each subject was limiting. Results might have been more

robust through the use of observation of the students during the reading and area of

strength/expertise processes, looking for metacognitive strategies that were used and not used.

The interviewer could have provided more explanation of the metacognitive processes rather

than deducting it from the interviews, and looked for metacognitive strategies on multiple

occasions, coaching the student to be thinking about them between sessions. Even with

familiarity with what the researcher would be looking for, a think-aloud would be taxing on the

overburdened working memory in the reading process and might not yield the desired results. It

would definitely provide more specific strategies of the processing of the area of

strength/expertise than was extracted from the interview data. Multiple sessions would also have

allowed the interviewer to develop more of a rapport with the student and help develop the

concept of metacognitive thinking that was being sought.

Recommendations for further research

The limitations of this study prohibited think-aloud work with the beginning readers to

assess their actual skills. Another study might be conducted using questions with the students to

determine the actual metacognitive processes in use rather than the assumed ones that were

remembered in these interviews. This would require coordination with the reading centers for

appropriate reading materials, or a teacher doing the interviews familiar with the individuals and

their abilities to eliminate the fear factors.

A second study might be to use Schmitt's Metacomprehension Strategy Index (1999) in a

modified oral version to determine if the students actually are aware of some best practices for

metacognitive thinking during reading. A copy of the index appears in Appendix C. This

multiple-choice test asks students what they should do before, during and after reading. A sample

question is:

12. While I'm reading, it's a good idea to:

    A. Stop to retell the main points to see if I am understanding what has happened so
       far.
    B. Read the story quickly so that I can find out what happened.
    C. Read only the beginning and the end of the story to find out what it is about.

D. Skip the parts that are too difficult for me.

This test is designed for children, so it would need slight modification for adults. It is also designed to be taken on paper, but is above the reading level of the population in question, so it would need to be administered orally. This test would provide information about what the students are actually thinking is important during the reading process. There are some limitations because it is a multiple-choice test, but it is comprehensive in the skills it reviews for.

Another study would be to implement teaching these metacognitive principles early on in the reading process with NSE ABE adults. An intervention like this could help determine if comprehension is enhanced and to see if students previously unable to break through the second-third grade plateau might be able to get beyond it.

A follow-on program to this study would be use to test the implications and assess if the metacognitive skills of expertise actually would benefit the new readers. A cross-over program could be piloted, working with the students to specifically identify the metacognitive strategies they use during tasks in which they are successful and teaching them to leverage them in the reading process. Reading levels could be benchmarked and gains identified after the intervention to monitor its success.

Inevitably, it will continue to remain a partnership between the learner and the teacher for the NSE beginning reader to continue to make progress. The key recommendation is to look at the strengths the learner already possesses, exploring for metaphors of the metacognitive processes that can aid in the transfer of the acquisition of new reading skills based on the strengths of the existing expertise areas.

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APPENDIX A. PARTICIPANT INTERVIEW QUESTIONS

The following questions were discussed with the participants during the interview

process:

1. Tell me about something you do really well; a strength you have; perhaps you might even consider yourself an expert in this.

2. How did you learn how to do _____?

3. What are you thinking about when you do this?

4. How do you figure out a problem when you are doing _____?

5. What is reading?

6. Why do people read?

7. Why are you learning to read?

8. How does someone learn to read?

9. How do you know what the words are?

10. What do you do when you find a word that you don't know?

11. What do you do/think after you are done reading a passage?

12. How do you figure out what a story or passage is about?

13. How do you know if you've understood what you have read?

14. What are you thinking about when you are reading?

15. How would you teach someone how to read if you met someone who couldn't read any words at all?

16. How do you know how to do things that require reading if you can't read the signs or directions?

APPENDIX B. INTERVIEW QUESTIONS RATIONALE

The opening questions are about the area of expertise. The participant will be the determinant of the area of expertise. These questions will begin the interview on a comfortable point for the participant, and should uncover metacognitive strategies including the learning process, thinking during operation and problem solving during participation.

1. Tell me about something you do really well; a strength you have; perhaps you would consider yourself an expert in this.

2. How did you learn how to do _____?

3. What are you thinking about when you do this?

4. How do you figure out a problem when you are doing _____?

The next two questions will reveal the participants general understanding of the concept of reading. It will be interesting to see if the concept of comprehension is mentioned. The literature says it won't be.

5. What is reading?

6. Why do people read?

Answers to question seven will explain motivation about the individual's desire to learn to read. In the inmates, it may also reveal participants who are learning to read unwillingly.

7. Why are you learning to read?

Answers to questions eight through ten will explain some of the process questions of the mechanics/decoding around reading, which is the level at which most of these students function.

8. How does someone learn to read?

9. How do you know what the words are?

10. What do you do when you find a word that you don't know?

Questions eleven through fourteen look at comprehension and include the types of questions good readers typically ask themselves during the reading process. Will the low-literacy readers ask themselves these types of questions?

11. What do you do/think after you are done reading a passage?

12. How do you figure out what a story or passage is about?

13. How do you know if you've understood what you have read?

14. What are you thinking about when you are reading?

Question fifteen is designed to repeat the concepts in question eight after they have thought more about the reading process. This type of question also exposes metacognitive strategies used by an individual.

15. How would you teach someone how to read if you met someone who couldn't read any words at all?

Question sixteen is a transition question about coping in a non-reading world to see if there are any strategies revealed common to the reading and expertise area.

16. How do you know how to do things that require reading if you can't read the signs or directions?

APPENDIX C. METACOMPREHENSION STRATEGY INDEX

Directions: Think about what kinds of things you can do to help you understand a story better before, during, and after you read it. Read each of the lists of four statements and decide which one of them would help *you* the most. *There are no right answers.* It is just what *you* think would help the most. Circle the letter of the statement you choose.

I. In each set of four, choose the one statement which tells a good thing to do to help you understand a story better *before* you read it.
1. Before I begin reading, it's a good idea to:

    A.   See how many pages are in the story.
    B.   Look up all of the big words in the dictionary.
    C.   Make some guesses about what I think will happen in the story.
    D.   Think about what has happened so far in the story.

2. Before I begin reading, it's a good idea to;

    A.   Look at the pictures to see what the story is about.
    B.   Decide how long it will take me to read the story.
    C.   Sound out the words I don't know.
    D.   Check to see if the story is making sense.

3. Before I begin reading, it's a good idea to:

    A.   Ask someone to read the story to me.
    B.   Read the title to see what the story is about.
    C.   Check to see if most of the words have long or short vowels in them.
    D.   Check to see if the pictures are in order and make sense.

4. Before I begin reading, it's a good idea to:

    A.   Check to see that no pages are missing.
    B.   Make a list of the words I'm not sure about.
    C.   Use the title and pictures to help me make guesses about what will happen in the story.
    D.   Read the last sentence so I will know how the story ends.

5. Before I begin reading, it's a good idea to:

    A.   Decide on why I am going to read the story.
    B.   Use the difficult words to help me make guesses about what will happen in the story
    C.   Reread some parts to see if I can figure out what is happening if things aren't making sense.
    D.   Ask for help with the difficult words.

6. Before I begin reading, it's a good idea to:

    A.   Retell all of the main points that have happened so far.
    B.   Ask myself questions that I would like to have answered in the story.
    C.   Think about the meanings of the words which have more than one meaning.
    D.   Look through the story to find all of the words with three or more syllables.

7. Before I begin reading, it's a good idea to:

    A.   Check to see if I have read this story before.
    B.   Use my questions and guesses as a reason for reading the story.
    C.   Make sure I can pronounce all of the words before I start.
    D.   Think of a better title for the story.

8. Before I begin reading, it's a good idea to:

    A.   Think of what I already know about the things I see in the pictures.
    B.   See how many pages are in the story.
    C.   Choose the best part of the story to read again.
    D.   Read the story aloud to someone.

9. Before I begin reading, it's a good idea to:

    A.   Practice reading the story aloud.
    B.   Retell all of the main points to make sure I can remember the story.
    C.   Think of what the people in the story might be like.
    D.   Decide if I have enough time to read the story.

10. Before I begin reading, it's a good idea to:

    A.   Check to see if I am understanding the story so far.
    B.   Check to see if the words have more than one meaning.
    C.   Think about where the story might be taking place.
    D.   List all of the important details.

II. In each set of four, choose the one statement which tells a good thing to do to help you understand a story better *while* you are reading it.

11. While I'm reading, it's a good idea to:

    A.   Read the story very slowly so that I will not miss any important parts.
    B.   Read the title to see what the story is about.
    C.   Check to see if the pictures have anything missing.
    D.   Check to see if the story is making sense by seeing if I can tell what's happened so far.

12. While I'm reading, it's a good idea to:

    A.   Stop to retell the main points to see if I am understanding what has happened so far.
    B.   Read the story quickly so that I can find out what happened.
    C.   Read only the beginning and the end of the story to find out what it is about.
    D.   Skip the parts that are too difficult for me.

13. While I'm reading, it's a good idea to:

    A.   Look all of the big words up in the dictionary.
    B.   Put the book away and find another one if things aren't making sense.
    C.   Keep thinking about the title and the pictures to help me decide what is going to happen next.
    D.   Keep track of how many pages I have left to read.

14. While I'm reading, it's a good idea to:

    A.   Keep track of how long it is taking me to read the story.
    B.   Check to see if I can answer any of the questions I asked before I started reading.
    C.   Read the title to see what the story is going to be about.
    D.   Add the missing details to the pictures.

15. While I'm reading, it's a good idea to:

    A.   Have someone read the story aloud to me.
    B.   Keep track of how many pages I have read.
    C.   List the story's main character.
    D.   Check to see if my guesses are right or wrong.

16. While I'm reading, it's a good idea to:

    A.   Check to see that the characters are real.
    B.   Make a lot of guesses about what is going to happen next.
    C.   Not look at the pictures because they might confuse me.
    D.   Read the story aloud to someone.

17. While I'm reading, it's a good idea to:

    A.   Try to answer the questions I asked myself.
    B.   Try not to confuse what I already know with what Fm reading about.
    C.   Read the story silently.
    D.   Check to see if I am saying the new vocabulary words correctly.

18. While I'm reading, it's a good idea to:

    A.   Try to see if my guesses are going to be right or wrong.
    B.   Reread to be sure I haven't missed any of the words.
    C.   Decide on why I am reading the story.
    D.   List what happened first, second, third, and soon.

19. While I'm reading, it's a good idea to:

    A.   See if I can recognize the new vocabulary words.
    A.   Be careful not to skip any parts of the story.
    B.   Check to see how many of the words I already know.
    C.   Keep thinking of what I already know about the things and ideas in the story to help me decide what is going to happen.

20. While I'm reading, it's a good idea to:

    A.   Reread some parts or read ahead to see if I can figure out what is happening if things aren't making sense.
    B.   Take my time reading so that I can be sure I understand what is happening.
    C.   Change the ending so that it makes sense.
    D.   Check to see if there are enough pictures to help make the story ideas clear.

III. In each set of four, choose the one statement which tells a good thing to do to help you understand a story better after you have read it.

21. After I've read a story it's a good idea to:

    A.   Count how many pages I read with no mistakes.
    B.   Check to see if there were enough pictures to go with the story to make it interesting.
    C.   Check to see if I met my purpose for reading the story.
    D.   Underline the causes and effects.

22. After I've read a story it's a good idea to:

    A.   Underline the main idea.
    B.   Retell the main points of the whole story so that I can check to see if I understood it.
    C.   Read the story again to be sure I said all of the words right.
    D.   Practice reading the story aloud.

23. After I've read a story it's a good idea to:

    A.   Read the title and look over the story to see what it is about.
    B.   Check to see if I skipped any of the vocabulary words.
    C.   Think about what made me make good or bad predictions.
    D.   Make a guess about what will happen next in the story.

24. After I've read a story it's a good idea to:

    A.   Look up all of the big words in the dictionary.
    B.   Read the best parts aloud.
    C.   Have someone read the story aloud to me.
    D.   Think about how the story was like things I already knew about before I started reading.

25. After I've read a story it's a good idea to:

    A.   Think about how I would have acted if I were the main character in the story.
    B.   Practice reading the story silently for practice of good reading.
    C.   Look over the story title and pictures to see what will happen.
    D.   Make a list of the things I understood the most.

Schmitt, Maribeth, C., (1999). A questionnaire to measure children's awareness of strategic reading processes. In S.J. Barrentine (Ed.). *Reading assessment. Principles and practices for elementary teachers* , (pp. 189-195). Newark , DE : International Reading Association

APPENDIX D. PERMISSION TO USE MATERIALS

Permission to use BACEIS Model, Figure 4:

-----Original Message-----
From: hopehartman@optonline.net
To: rejoicer@aol.com
Sent: Wed, 31 May 2006 7:25 PM
Subject: Re: Permission to use diagram in dissertation

Hi Jean,
Yes, you can have permission to use the BACEIS Model
diagram in your dissertation as long as you cite me as the
source and acknowledge permission to reproduce it.
Good luck with your doctoral work!
Sincerely,
Hope J. Hartman, Ph.D.

----- Original Message -----
From: rejoicer@aol.com
To: hopehartman@optonline.net
Sent: Monday, May 29, 2006 7:39 PM
Subject: Permission to use diagram in dissertation

Good afternoon Dr. Hartman.

I'm writing my dissertation on the metacognitive processes of native English
speaking adults learning to read and I would like to include your BACESIS model
diagram as a figure in my work. Its on page 45 in
Hartman, H. J. (2001). *Metacognition in learning and instruction: Theory,
research and practice* (Vol. 19). Dordrecht, Netherlands: Kluwer Academic Publishers.

Of course I will cite you and acknowledge your permission to use the diagram.
I've attached the copy as it scanned from your material so you can see what I'm intending
on using.

Thanks for your consideration.

Blessings,
Jean Marrapodi
Capella University
www.applestar.org

Permission to use Figure 5:

    -----Original Message-----
From: tharp@berkeley.edu
To: rejoicer@aol.com
Sent: Tue, 30 May 2006 8:17 AM
Subject: Re: Permission to use diagram

Permission granted as requested.
Roland Tharp

P.S. I'm so glad you wrote, Jean. One of my tasks for today was to
try to get that figure onto my computer -- the original is long lost, and
all I have is the book version. I didn't know about that website! So this
morning I am 'rejoicer.'

Roland Tharp
Research Professor and Senior Scientist
Center for Research on Education, Diversity & Excellence (CREDE)
Graduate School of Education
University of California, Berkeley

On Mon, 29 May 2006 21:32:18 -0400
 rejoicer@aol.com wrote:
Good Day Dr. Tharp.
I'm doing my dissertation on the metacognitive processes of native English speaking
adults learning to read. I'd like to use the Vygotsky diagram cited on the NCREL website
in my dissertation and was looking for permission to do so. Here's the link:
http://www.ncrel.org/sdrs/areas/issues/students/learning/lr1zpd.htm

Of course I will cite you as the source. As I'm sure you're well aware, the original source
is >R.G. Tharp and R. Gallimore (1988). Rousing minds to life (p.35).
This is a fairly old source. If you've revised your thinking and have another suggestion
for explaining the ZPD and the scaffolding concepts, I'd love to hear about it.
Thanks for your consideration.

Blessings,
Jean Marrapodi
Capella University
www.applestar.org