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Motivating Students to Read

Evidence for Classroom Practices that Increase Reading Motivation and Achievement

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In their invitation to contribute to this volume, the editors challenged us with the following question: "What motivates students to read?" Our contribution to this dialogue on reading is to address this question with findings from available research. Before we can begin, however, we need to unpack the question. We are referring to teachers and others who have an opportunity to implement classroom practices and create educational environments for reading development. Our chapter does not address parents, who are also influential in motivating, and does not address the peer group, which has high influence over reading and other aspects of lifestyle, especially for adolescent students. Our aim is to provide a knowledge base to guide the decision making for a variety of educators.

We use the word *motivate* in the sense of engagement in an important task. The term *motivate* does not point toward mere frills, fun, or transitory excitement, but to a cognitive commitment toward reading to learn and to extending one's aesthetic experience. Motivation, then, is not isolated from the language or cognitive processes of reading, but gives energy and direction to them. In our discussion, *student* refers to learners ages 8–14 years. In our literature review, we found very few systematic investigations of motivation in students younger than this age range. We interpret *reading* as understanding the content of a text. Although processes of word recognition are indispensable to reading comprehension, there is little literature on motivation for word-level reading processes. We address comprehension of text in a relatively simple form, not including issues of literary

criticism or synthesis of multiple texts in extended knowledge-seeking endeavors.

Finally, we interpret the question as a quest for causal relationships. We are interested in whether educators can design and sustain contexts in educational settings that foster long-term reading motivation. Therefore, we searched for experimental evidence regarding classroom conditions that are conducive to long-term motivational development.

Prior to examining classroom conditions that influence motivation for reading, it is important to recognize that reading motivation has many dimensions; it is not a unitary attribute. Students are not either motivated or unmotivated. Rather, students are likely to exhibit different forms of motivation for reading, as well as different levels of these forms. In a theoretical literature review with extensive statistical investigations, Wigfield and Guthrie (1997) identified at least 12 dimensions of motivation for reading. In this chapter, we want to talk about three types of reading motivation based on these 12 dimensions: external motivation, internal motivation, and self-efficacy.

External motivation is the seeking of prizes and recognition for excellence in reading. Externally motivated students focus cognitive effort on reading activities to gain incentives such as points, public praise, or money. Their motivations are external (or extrinsic) because these students depend upon teachers, peers, computers, or systems outside themselves to deliver the benefits from their reading activities.

Internal motivation is the seeking of benefits that the reading activity itself confers on the reader. Internally motivated readers have desires, interests, needs, and dispositions that are satisfied through various forms of reading activities. The internally (or intrinsically) motivated student who is interested, for example, in reptiles gains new information about dinosaurs to satisfy a curiosity, and this new information is his or her reward for reading. Internally motivated readers believe that reading is valuable and embrace the goal of reading well and reading widely. They have internalized reading excellence because they are aware that reading is valued by teachers and parents and that it will benefit them in the future.

A third motivational attribute is *self-efficacy*. Students with self-efficacy believe they have the capability to read well. They approach books with confidence and tackle challenging texts or difficult words with the expectation that they will master them. They

have a "can-do" approach to reading and learning from text. In contrast, students with lower self-efficacy are likely to say, "I can't do it," when faced with long passages, unfamiliar text, or new expectations for learning from a book. Without the energizing value of high efficacy, students are unable to sustain the effort required to learn reading skills or to become knowledgeable through print.

To address the question of what motivates students to read, we identified 22 studies that experimentally compared conditions expected to increase motivation with conditions not expected to increase motivation. All of these studies are related to reading from text or manipulating words meaningfully. Most of the students were ages 8–14, although a few were undergraduate students. A substantial majority (73%) of the studies in our review were true experiments, and the others were quasi-experiments. In true experiments, students (the units of analysis) are randomly assigned to treatment conditions. With random assignment, there is no bias, and the groups are similar on all variables at the outset. If there is a statistically significant difference between groups on a variable following the completion of the treatment and control conditions, the experimenters can infer that the difference was attributable to the treatment. For example, in the McLoyd (1979) study of the effects of choice, which is discussed later in this chapter, students were randomly assigned to choice and no-choice conditions. Following the study, the choice group was higher on the measure of motivation than the non-choice group. There is no other explanation than the response to treatment to explain this difference. Choice increased motivation.

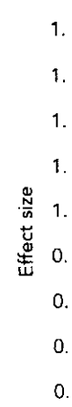
Of course, it is possible to measure all of the groups on a pretest before the treatment. If the groups have the same results on the pretest, this confirms the effects of randomness in assignment to treatment. Some measures, however, are reactive. That is, having the study participants take the measure affects the treatment. For example, if a study has a motivation measure as a pretest, followed by an instructional treatment involving choice, students may be sensitized to the treatment. They may think that the choice is intended to influence their motivation. In this case, the pretest and treatment interact, and the inference of causality from the treatment is weakened. Therefore, pretests are not usually used in true experiments that have a motivation-oriented treatment. Cognitive experiments in reading may also be subject to reactivity of the pretest. Any time the pretest gives a clue, or an opportunity to practice the skill or attribute being taught in the treatment condition, the pretest

may interact with the treatment and thus weaken the inference of causality in the experiment.

In this review, all of the experiments, except those that are noted otherwise, contain random assignment of students to experimental conditions. This permits causal inferences from the outcomes of the study. Such an inference is necessary, if one is attempting to determine whether an instructional practice influences a dependent variable of any kind. To address the question "What motivates students to read?" it is necessary to compile and weigh the evidence from experiments with random assignment, as reported in this chapter.

Within the 22 studies identified, we made 131 experimental comparisons. Each comparison was quantified using effect size, which is the mean (average) of students' scores on the dependent variable in one experimental condition minus the mean of students' scores on the same dependent variable in a control condition divided by the standard deviation of students' scores in the control condition. For example, if one group of 8-year-old students was given a choice of which paragraph to read and a second group was not given a choice of which paragraph to read, the motivation for reading each paragraph could be compared to examine the effect of choice on motivation. If the choice group had higher scores on the dependent variable than the no-choice group, a positive effect size would be identified, indicating that the classroom practice of providing a choice of paragraph reading influenced students' motivation.

In the review, 63 effect sizes were computed for knowledge goals, 46 effect sizes for student choices, 54 for influences of texts on motivation, and 7 for collaboration in reading. This includes 39 experimental comparisons in which the treatment condition was coded in two categories. These effect sizes were moderate to high, indicating that they were substantially important instructional characteristics for improving reading, according to existing criteria in the research literature. The effect sizes are displayed in Figure 14.1. Knowledge goals in reading had an effect size of 0.72 on motivation; student choices afforded in the classroom had an effect size of 0.95 on motivation for reading; the nature of texts influenced motivation with an effect size of 1.15; and collaboration for reading influenced motivation with an effect size of 0.52. These classroom practices have each been verified experimentally as having a sizable impact on reading motivation and should be viewed as major constituents of any long-term instructional program. Next, we discuss each of the educational practices with reference to some of the evidence.



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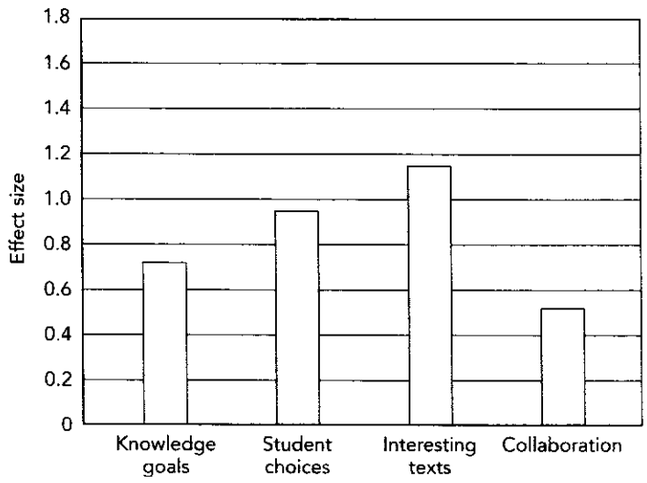

Figure 14.1. Benefits of motivational classroom practices for students' reading motivation.

INFLUENCES OF CONTENT GOALS ON STUDENT MOTIVATION FOR READING

When students are faced with a new text in a classroom situation, they may adopt a wide range of goals and purposes for reading this text. At the same time, a wide range of teachers' practices can enable students to adopt goals and purposes for reading that are conducive to motivational development and reading improvement. Enabling students to become deeply immersed in and intrigued by the content of a passage or book is a central practice among teachers who are effective in motivating students. When students are eager to pursue the topic of a text and keen to follow the next steps of a narrative literary work, they are likely not only to read effectively but also to develop additional motivation for subsequent reading. Teachers can help students make the content of texts richly rewarding in many ways: enabling students to use their background knowledge and experience, arranging for hands-on activities that arouse curiosity that can be satisfied through reading, and modeling the behaviors of the curious reader who seeks to understand texts as fully as possible.

Emphasizing content learning during reading instruction can be accomplished with a wide range of approaches. Some teachers have extended projects in which students pursue a theme and read a variety of materials. For instance, some students have the opportunity to study a state within the United States to make a brochure

that advertises the state and describes its merits or attractions to tourists and the public. Another approach is to expect students to be able to explain the meaning of a text to other individuals. This technique was studied by Benware and Deci (1984), who assigned some students to read an article about the brain in order to explain it to others. Students in the control group were given the task of reading to pass a test. Students given the goal of reading to teach others reported more interest in the content, more enjoyment in the process of reading, and a willingness to participate further in the activity (to repeat the study). They also attained higher conceptual learning from the text than the other students did. This motivational practice increased both motivational outcomes of the activity and new knowledge derived from the materials.

One frequent approach to emphasizing content goals for reading instruction that might serve to motivate students is to pursue a conceptual theme for an extended period of time. For instance, if students are studying the American colonies or westward expansion, they accumulate an understanding of the topic and develop significant accumulations of expertise. The students' sense of being in command of the topic fuels their confidence and arouses new curiosities, while providing a platform for understanding the content of new materials. This content emphasis encourages students to adopt mastery goals for reading activities and to read with purpose, rather than to merely complete assignments.

Connected to the practice of using content goals are several motivational practices, such as the use of interesting text. Interesting text has dual features of being devoted to a topic that is intriguing to the learner and having an appealing layout of text illustrations and graphics. Interesting texts naturally elicit the goal of content learning and encourage students to read for mastery of information. Students immersed in interesting texts are not consumed with anxiety about whether they are reading better or worse than their classmates and are not fearful of looking foolish. Teachers who provide conceptual themes, real-world connections to texts, a variety of topics and genre within the classroom, and tasks that allow students to expand their knowledge and experience from reading are enhancing students' intrinsic motivations for reading. These motivations propel students toward excellence in the skills of comprehension and toward high amounts of reading, which also increase comprehension.

A substantial body of investigation supports the motivational practice of using content goals for reading instruction. In one experimental study, Grolnick and Ryan (1987) gave three different groups

of fifth graders the same story about health and medical care across history. Students were randomly assigned one of three different purposes for reading the story: 1) a content reading goal (students were to follow the meaning and build their own understanding of this text), 2) answering test questions correctly (students were urged to read for the purpose of attaining the highest possible test score), and 3) control (students were given few directions but were encouraged to read on their own).

The results indicated that students who read with the purpose of understanding the content were more interested in the text and gained more conceptual knowledge than students who read to attain the highest test score. The content-purpose group wrote essays that were more elaborate and captured more of the main ideas and important details than the control students in this study did. In comparison, students who were reading to excel on the test recalled facts by rote and reported feeling more pressure to perform than those in the content-purpose group. It is evident that content goals in reading increase motivation for the reading activity and simultaneously foster deep conceptual knowledge growth.

After having established rich content learning goals, teachers can continue to motivate students to read through effective feedback on the students' progress toward the goals. Butler and Nisan (1986) conducted an experiment with sixth-grade students in a word-building activity. Students were randomly assigned to a condition in which they 1) received comments about how they were doing in the task, how challenging the task was, and how their strategies were effective in succeeding in the activity; 2) were told they would be given grades; or 3) were provided no feedback in the task at all. Students receiving feedback that helped them understand how well they were succeeding and how the task could be performed effectively reported that the task was more interesting. Feedback describes students' varying levels of performance on portions of the task and gives students a sense of their progress and criteria for improving their competency. This effective feedback during reading activities enables students to perceive when they are reading competently and how their reading comprehension can be improved. This information satisfies the fundamental need for perceiving oneself as competent in an important task (Ryan & Deci, 2000).

Thus, an important part of the motivational practice of using contents goals for reading instruction is to generate informational feedback and support for the learners to enable them to see that they are attaining these interesting and valuable goals through their

exercise of cognitive competency and their effort in reading (Butler & Nisan, 1986). In addition, children gain valuable feedback about their performance from their peers. Butler (1995) found that students who were given the content goal for mastering a task increased their motivation by reviewing the work of peers doing the same activity. Students with a content learning goal viewed the peers' work as more interesting and reported seeking further information more frequently than students who were given the performance goal of succeeding as much as possible to be favorably compared with other students. In other words, the strength of content learning goals in reading can be increased by appropriate attention to the work of peers as a form of feedback and a source of information for self-improvement (Butler & Nisan, 1986).

Content goals in teaching reading or English are often described as *mastery goals.* Students perceive that the teacher is emphasizing content mastery goals with the following types of statements:

"The teacher makes sure I understand the work."

"The teacher pays attention to whether I am improving."

"The teacher wants us to try new things."

"I work hard to learn."

In contrast, when teachers are emphasizing *performance goals,* students are likely to agree with the following statements:

"Students want to know how others score on assignments."

"Only a few students can get top marks."

"Students feel badly when they do not do as well as others."

Ames and Archer (1988) found that students in grades 8–11 who perceived their class to be mastery oriented were more likely to have positive attitudes toward the subject matter, to embrace challenging tasks, to use effective strategies for studying, and to attribute their success in a class to their specific learning strategies than students who perceived their class to be performance-oriented. A complementary finding was reported by Anderman, Maehr, and Midgley (1999), who found that student motivation in a performance-oriented middle school was very different from motivation in a school that focused on content mastery. In the performance-oriented school, there was

a pervasive emphasis on competitive assessment of student progress, recognition of achievement for high grades, and a strong tracking program. In the mastery-oriented schools, content goals were emphasized along with a commitment to interdisciplinary projects and a focus on student interests. In the performance-oriented schools, students reported high levels of extrinsic motivation by responding affirmatively to the following kinds of statements:

"The main reason I do my work in English is because we get grades."

"I don't care whether I understand something or not in English as long I get the answers right."

That is, a mastery orientation with a content emphasis in the classroom led to interest in content, which represents intrinsic motivation for reading and learning English, whereas a performance orientation in the classroom led to an interest in gaining high grades and a competitive advantage over other students, which represents extrinsic motivation.

Similarly, Butler (1995) found that fourth and fifth graders working in mastery-oriented conditions used feedback about other students' performances to improve understanding of their tasks. In contrast, students working in performance conditions in which high scores were emphasized were more likely to use information about other students' work to improve their grades and test scores. In the performance conditions, students used information about their peers' work to "get a better grade for myself," but in the mastery conditions students used information about other students' work to "help me understand how to improve and get better on this task." Across a wide range of ages and classroom environments, the pattern is consistent showing that teachers who emphasize content goals and deep understanding enable students to become intrinsically motivated to read and comprehend, whereas teachers who emphasize performance goals of grades and extrinsic incentives increase students' attention to their performance and their standing relative to peers, which represent extrinsic motivations for reading.

Another motivation, confidence (or self-efficacy), can be increased by providing specific content goals and immediate feedback about progress. These combinations of specific goals and feedback can increase students' self-efficacy, which translates into higher

effort and devotion to reading. In an experiment, Schunk and Swartz (1993) provided some students specific content goals in a writing activity with strategies and feedback. Other students were given only the general goal of composing a paragraph. Students given specific goals, and information about their progress toward the goals, had more confidence in their writing than students assigned a more global task. Schunk and Zimmerman (1997) reviewed research on goal setting and self-efficacy in a wide range of reading investigations. Children's efficacy for reading and confidence in their future success were consistently improved by providing specific goals with information about the progress toward them. Thus, the concreteness of the goal, and information about progress toward the goal of understanding, foster students' motivational processes of self-efficacy and increase their self-confidence as readers.

Content learning goals are powerful not only because they increase intrinsic motivation for reading, but also because they increase the students' comprehension and cognitive outcomes in reading activities. Grolnick and Ryan (1987) reported that when fifth-grade students in an experiment were given content learning goals for reading, they gained more conceptual knowledge than when they were given performance goals of scoring well on tests. It is likely that the content goals increased motivation, which fosters deeper comprehension and meaningful processing of text. In addition, content goals may focus students' attention on "big ideas," whereas performance goals focus students' attention on completing the task and minimizing effort necessary to get an adequate test score on the assessment. A similar finding was reported by de Sousa and Oakhill (1996) who showed that third and fourth graders who read in a condition that involved "reading like a detective to uncover clues toward meaning" (a content learning goal) used comprehension monitoring strategies more fully than students who read a normal text that did not have the detective-game activities. Students in the content learning condition comprehended more fully because they monitored the level of their understanding as they read. This benefit of content learning goals was specially marked for students with lower interest in the text. Higher interest students were likely to be monitoring their comprehension, irrespective of whether the condition involved reading like a detective or not. The conclusion is that content learning goals increased the comprehension monitoring of lower interest readers more fully than those with higher interest.

Consistent with these findings, students' recall of what they read is higher when they are given content learning goals that are

likely to be motivating than when they are given performance goals that lead them to be competitive or to have no goals at all for their reading activities (Graham & Golan, 1991). Related to the cognitive benefit of content learning goals in reading is the alignment of the students' purpose with the content of the text. Students' purposes are closely related to their motivations. When students read purposefully, they are more motivated to gain understanding than when they read with limited or no purposes. If a text contains all of the information necessary for students to meet their purposes in reading, then motivations for the reading activity and the recall of the text are relatively high. In other words, when students' purposes for reading (in other words, their content learning goals) are well aligned with the subject matter in the text and the content of the materials, students' motivation and memory of new knowledge gained will be increased (Schraw & Dennison, 1994).

It should be noted that the effect of content goals on motivation may be undermined by distracting text material. If the graphic information and illustrations or specific details in the text are distracting from the main theme or are irrelevant, they reduce interest, are ignored by students, and decrease understanding of the material (Harp & Mayer, 1997).

Summarizing across a wide range of studies, the mean effect size of content knowledge goals on students' reading motivation was found to be 0.72, as shown in Figure 14.1. Furthermore, knowledge goals had an effect size of 0.87 on reading achievement and comprehension, as shown in Figure 14.2. The evidence is that using knowledge goals in reading instruction enhances students' reading motivation and achievement.

INFLUENCES OF CHOICE ON STUDENT MOTIVATION FOR READING

Teachers generally believe that choice is motivating for young readers. Surveys at elementary schools (Sweet, Guthrie, & Ng, 1998), middle schools (Zahorik, 1996), and secondary schools (Flowerday & Schraw, 2000) showed that teachers believe that providing choices of reading activities increase students' interest and time spent in reading. These are aspects of intrinsic motivation. A range of choices may include which book to read; where to do the reading within the classroom; how to respond (in writing or drawing); whether to read alone or with a partner; and especially which genre and authors

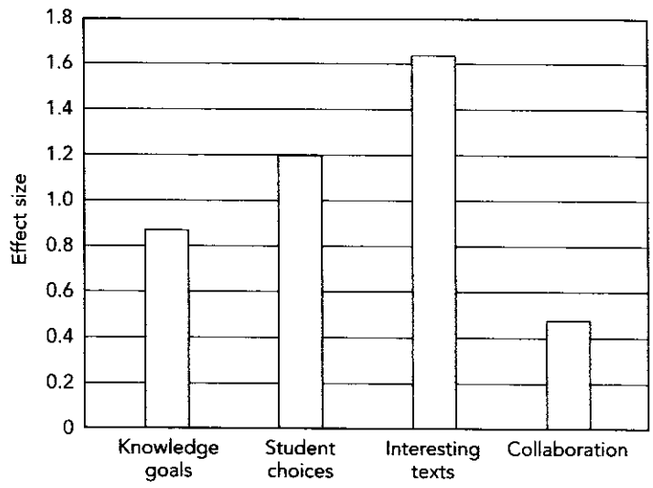

Figure 14.2. Benefits of motivational classroom practices for students' reading comprehension and achievement.

to follow. A substantial body of experimental evidence undergirds these beliefs about the power of choice to increase intrinsic motivations for reading.

McLoyd (1979) conducted an experiment on choice with second- and third-grade students. Some individuals were randomly assigned to be given a choice of which book to read, whereas other individuals were randomly assigned to participate in a reading activity without choice. The group with choice selected books from the following: *Amelia Bedelia and the Surprise Shower, George the Drummer Boy, Here Comes the Strikeout, Kittens and More Kittens, Prehistoric Monsters Did the Strangest Things,* and *You Will Go to the Moon.* A variety of topics and genres for both boys and girls were provided. In the choice condition, each child selected the book he or she preferred from the list. In the no-choice condition, the child was given a book by the experimenter that he or she had not chosen to read. All students read about 250 words of their books. They were then given free time in which they could do crossword puzzles, play Scrabble or a math game, or continue reading the book. Time spent reading during this 10-minute free period was one measure of intrinsic motivation. Number of words read during this free choice period was a second measure of intrinsic motivation for reading under these two conditions. Findings were that after the initial 250 words were

read, students in the choice condition read for about 5 minutes (295 seconds), whereas students in the no-choice condition read for only about 2 minutes (131 seconds). This was a highly significant advantage for the choice condition in motivation for reading. The variable of number of words reflected this time expenditure. After the initial 250 words were read, students in the choice condition read 440 words, whereas those in the no-choice condition read 216 words in the available time, meaning that there was a highly significant advantage in motivation for the choice condition.

Reynolds and Symons (2001) reported a similar finding in which they gave third-grade students a choice of which book to read in an information-seeking activity. They were given three books on three different topics and 2 minutes to preview and select a topic. In the no-choice condition, students were given the three books for 2 minutes and then were randomly assigned a book for the task. Students were then given four questions to answer by searching in the text. Interest in the different topics and prior knowledge about the topics were controlled for statistically. Students in the choice condition spent 23% less time reading than did students in the no-choice condition, and students in the choice condition were 21% more accurate in answering questions than were students in the no-choice condition. Furthermore, the quality of the strategies used by students in the choice condition was higher than that used by students in the no-choice condition. Both of these indicators show higher intrinsic motivation for reading, favoring students who selected their reading materials. Consequently, the increase in motivation was accompanied by an increase in competence in using cognitive strategies in this information-seeking task in reading.

The role of choice in motivation for reading may influence children from diverse cultural backgrounds differently. Iyengar and Lepper (1999) theorized that Anglo-American children and Asian American children may respond to choices differently because Asian American children seek to maintain high relationships with parents or authority figures and follow their suggestions. Confirming this, Iyengar and Lepper found that Anglo-American children spent more time in a literacy activity (a measure of intrinsic reading motivation) when *they* made the choice than when the experimenter made the choice. They also found that Anglo-American children were more motivated when they made the choice compared with when their mothers made the choice for them. In contrast, Asian American children were most intrinsically motivated when choices were made

for them by their mothers. They were less motivated to pursue activities of their own choice than to pursue activities chosen for them by trusted authority figures. It appears that the effect of choice on motivation is influenced by children's beliefs and values, which are embedded within their cultural experience.

When providing choice in reading activities is applied to ongoing instruction in classroom situations, it is usually integrated with other classroom practices. For example, Morrow (1992) reported on an experiment in which some students were provided a set of opportunities to choose texts and spend time with a genre they selected, whereas other students were presented with no choices in their reading activities. Students in the high-choice curriculum were able to select from a wide range of books and were able to read literary and informational texts that were not available in the no-choice condition. In other words, the practices of choice and diversity of genre were integrated into this classroom-based intervention. With the no-choice control condition, fewer genres were available and the text diversity was limited. Findings were that students in the intervention with choice and text diversity spent more time reading books after school in a free choice situation than students with no choice and low text diversity. In addition, students with the high-choice and high-diversity literacy opportunities showed higher reading comprehension, including better oral retelling of stories, text comprehension, and story rewriting, all of which measure different aspects of reading comprehension. In conclusion, when choice and text diversity were combined in a practical intervention within schools over a substantial time period, benefits were observable for intrinsic motivation, as measured by time spent reading and by cognitive competency in reading motivation, according to several indicators.

Benefits of choice in reading and literacy interactions can be shown with a variety of indicators of intrinsic motivation. For instance, Cordova and Lepper (1996) observed students in a computer-based literacy activity. Some students were provided choices about how to play a game, whereas others were given no choices about the game. Those given choice reported liking the game and believing themselves to be more competent in the game than the students in the no-choice condition reported. Many researchers use students' perceptions of their own competence as an indicator of the students' level of intrinsic motivation for tasks. Highly related to self-efficacy, perceived competence creates favorable conditions for

enjoying a task, spending time with a task, and devoting effort to success. A popular indicator of motivation is students' ratings of interest. For example, Schraw, Flowerday, and Reisetter (1998) provided some students choice in a testing situation, whereas other students had no choices in the test. Those with choice rated the materials read in the test as more interesting than those with no choice. In this experiment, it should be noted that choice did not increase performance on the test itself, although it increased interest in reading the materials on the test. It appears that in classroom learning situations, choice of text increases students' comprehension as well as their motivation, whereas in a traditional test, choice does not have the opportunity to facilitate or increase comprehension. In sum, the evidence points directly to the principle that providing choice increases students' motivation for reading and enhances their comprehension of self-selected texts.

The benefit of choice on reading on motivation is shown in Figure 14.1. The graph shows that the mean effect size of student choices on reading motivation was 0.95. Furthermore, student choices in the classroom had an effect size of 1.20 on reading achievement and comprehension, as shown in Figure 14.2. Clearly this aspect of providing academically significant choices during teaching is salient for students' reading development.

CONTRIBUTION OF INTERESTING TEXTS TO READING MOTIVATION

The implication for educational practice based on the literature review conducted here is that interesting texts increase motivation for reading and comprehension of those texts. In other words, when students are reading texts that they rate as interesting to them, they report that reading such texts is enjoyable. Students often say they wish to continue reading these texts when they have free time and select them when they have an opportunity (Ainley, Hidi, & Berndorff, 2002; Cordova & Lepper, 1996; Morrow, 1992), which are indicators of intrinsic motivation.

Children are more likely to comprehend texts that they find interesting than texts they do not rate as interesting. Evidence for this was reported by Wade, Buxton, and Kelly (1999), who found that when students rated a sentence within a text to be interesting, they were more likely to recall that sentence as a part of the content of

the text than if they rated the sentence as uninteresting. This positive effect of the interestingness of sentences prevailed, regardless of how important the sentence was rated by the students. In other words, important or not, interesting content within a text is recalled more highly than uninteresting content. Harp and Mayer (1997) confirmed this finding for illustrations in text. When students were given text with illustrations that were rated as interesting due to relevance to the content, the students' motivation for reading was higher than when they were given uninteresting (decorative) illustrations in the same text. Furthermore, Schraw and Dennison (1994) showed that when students were given text that was relevant to their purpose for reading, they rated the text as relatively interesting and they recalled that text more highly than other materials. In other words, recall of text segments that were interesting because of their relevance was greater than recall of uninteresting segments. The effect sizes for these impacts of text interest on comprehension and recall are substantial, as indicated in Figure 14.2.

Because interesting text is motivating and increases comprehension, it is valuable to ask, "What makes a text interesting?" Educators should identify the properties of a text that lead students to rate it as interesting. A well-documented finding is that students find a text interesting if they possess background knowledge about it (Schiefele, 1999). Of course, this does not mean that children should avoid reading about new topics important to their education, but rather that their initial interest will be higher in topic domains that are most well-matched to their prior knowledge. Having a text on a reasonably familiar topic, with its visual layout having an appropriate number of illustrations, graphics, and display features, is important to students' perceptions of how interesting the material is (Schraw, Bruning, & Svoboda, 1995). Related to this graphic layout, texts that appear to be easy to comprehend are rated as more interesting than texts that are expected to be difficult (Schraw et al., 1995). If students anticipate that they will be frustrated in their attempts to understand or complete a text reading activity, their self-efficacy is threatened and their ratings of text interest will be low.

This does not suggest that more illustrations and more vivid details are always better. Students can distinguish illustrations and facts that are distracting from those that are helpful for understanding the main ideas. For example, an illustration about a giant, fearsome gorilla in a story about gorillas' eating habits in the wild

may be entertaining but is not likely to be highly informative. Advanced learners perceive such distractions as negative, rather than positive. In other words, *interest* refers to qualities of a text that help students learn from a text. It does not merely refer to the brilliance or garishness of its appearance (Harp & Mayer, 1997).

Central to the interest value of a text is its relevance to the learner. For example, if students have well-established goals about learning about llamas in the Andes, texts on llamas will be rated as more interesting than texts on another subject. If students have embraced a purpose for learning, then reading materials that enable them to fulfill that purpose are perceived as relevant and thus interesting and valuable (Schraw & Dennison, 1994). Likewise, illustrations and detail within a text that are viewed as helpful for learning the content of a text and attaining the purposes for reading will be more interesting than less relevant or less useful illustrations and graphics (Harp & Mayer, 1997). This suggests that the motivational practices of using content goals and interesting texts for reading instruction can be profitably merged. In other words, when well-developed subject matter goals are sustained in the classroom and pursued by teachers and students, then texts that are valuable for attaining these purposes will be viewed as valuable and interesting to students.

Related to goal relevance of texts are activity connections. When students perceive that reading material is connected to an activity that they have been engaged in, the reading material acquires interest and motivational value. For example, if students have recently observed an ant farm in the classroom, they will most likely be enthusiastic about reading books on ants and their homemaking and social communications. When a text is associated with concrete activities a student has recently participated in, the text takes on the interest value of the activities themselves (Sweet et al., 1998; Swan, 2003).

In the analysis of all of the experimental comparisons on motivation, the factor of interesting texts had a mean effect size of 1.15 on students' reading motivation, as shown in Figure 14.1, indicating that high text interest increased motivation for reading substantially. Furthermore, the influence of interesting texts on students' reading achievement and comprehension had an effect size of 1.64, as shown in Figure 14.2, documenting that when students were interested in the text, they comprehended it more fully.

ROLES OF SOCIAL COLLABORATION DURING READING

Providing the opportunity and expectation for collaboration during reading and writing activities increases intrinsic motivation. Regrettably, few experimental investigations have been conducted that expressly focus on the effects of collaboration on reading motivation. However, related studies can be examined in reference to this educational practice. For example, Wentzel (1993) found that sixth- and seventh-grade students who possessed goals for classroom interactions that included social collaboration achieved more highly in reading, language arts, and other subject matters than students who did not have such well-formed social goals.

In addition, students who show responsibility goals in the classroom, such as thinking about how their behavior will affect other students, trying to do what the teacher asks of them, and continuing to work even when other students are making a lot of noise, are higher achievers than students who do not possess these social responsibility attributes (Wentzel, 1993). This leads to the conclusion that when students' social motivation and goals for collaboration are high their achievement is relatively high as well.

Consistent with teachers' beliefs, the process of collaborating socially in reading and academic activities increases intrinsic motivation, whereas activities that are pursued more individually are less motivating (Sweet et al., 1998). In an experimental investigation of this issue, Isaac, Sansone, and Smith (1999) found that when students across a wide range of ages were assigned to work collaboratively on a 1-hour activity of designing a school campus, they found the task interesting and wanted to continue the activity even after it was completed. In contrast, students who were assigned to work on the same design task individually, without interaction or conversation with other students, were less likely to rate the task as interesting and not at all keen to pursue the activity after the experimental study was completed. In other words, collaborative structures increase intrinsic motivation for academic tasks. This finding is similar to that of Ng, Guthrie, Van Meter, McCann, and Alao (1998) regarding elementary school students working in more highly and less highly collaborative conditions for reading and writing activities.

Social collaboration influenced students' reading motivation with an effect size of 0.52, as shown in Figure 14.1, showing that

when students worked together in reading, they were more motivated than when they worked alone. The impact of these social interactions for reading on achievement and comprehension had an effect size of 0.48, as shown in Figure 14.2, providing evidence that collaborating during reading increased students' ability to comprehend the reading materials.

A VIGNETTE FROM MYRA BUSKIRK'S CLASSROOM

The following example of the classroom practices we have been discussing was drawn from data we collected in an ongoing study supported by the Interagency Education Research Initiative (IERI), a joint program of the National Science Foundation, National Institute of Child Health and Human Development, and the U.S. Department of Education. In this study, engagement-supportive reading instruction is being implemented in 40 classrooms in four schools daily over 3 months of school. Videotapes of instruction are made regularly for research purposes, and this vignette is a faithful depiction of one videotaped lesson in Myra Buskirk's classroom.

Upon entering this fourth-grade classroom, we see the theme of the wetlands unfold. Myra's students are surrounded by posters of wetland plants and animals. At the front of the classroom is a chart listing observations of a wetland based on a recent field trip by Myra's students. Information books on the wetlands fill the classroom. Myra's students have been learning about how plants and animals survive in different environments, and their current focus is survival in the wetlands. In this classroom, the fourth graders learn reading strategies and techniques while building conceptual scientific knowledge because Myra believes it is important to integrate her reading instruction with science and social studies.

On this particular day, Myra begins her lesson by asking her students to observe a science experiment they began the day before. The children had placed celery stalks in water that was mixed with dirt and cocoa power to represent polluted water. After allowing the celery to soak over night, the students then observe the changes in the celery stalk and in the water. They discuss these changes, and Myra asks them to individually record predictions about why they think these changes occurred.

After having her students share their observations and predictions with the class, Myra opens a discussion about the wetland walk the class had taken on a previous field trip. In order to connect today's experiment with the children's prior knowledge about the wetlands, she asks the class to think of questions related to both their experiment and the plants they observed on their wetland walk. She encourages the students to turn to their neighbor and come up with one question that the two students would like to have answered. Myra gives her students the freedom to develop inquiries based on their own interests, but she keeps their focus by narrowing the topic to include only their experiment and wetland plants. She distributes information books on the wetlands for them to browse to inspire thoughtful questions.

After each pair of students has developed a question, Myra directs the attention of the class toward a chart called "Wetland Plant Questions." As the children share their own questions with the class, Myra records the questions on the chart, including the name of each paired child next to the pair's question. During the next part of the lesson, the children increasingly take control of their learning. Myra points out the large variety of information books on the wetlands, such as *Wetlands* and *Marshes and Swamps*, on the children's desks that they will use to answer their own questions. After a review of the text features found in expository books, Myra instructs the students to work in pairs to read and answer their questions. In order to ensure all of her students' success in learning from these books, Myra provides a variety of difficulty levels when selecting books for her lessons. Though the information books all share similar topical information, they span multiple reading levels so that all children can choose a text that is suitable to their reading ability.

As Myra's students begin to find answers to their own questions, the classroom begins to buzz with excitement. Children are proud to point out particularly interesting findings to their neighbors. One student even exclaims, "I just found Bobby's answer!" as she discovers the explanation to another student's question in her book, *Wetlands*. When a few students have trouble finding their own answers, Myra encourages them to help one another. The students can record their findings in any way they choose. A few children take notes as they read, whereas others write their answers after they have finished browsing. Myra only asks that the students give written explanatory answers that include enough information to fully answer their questions.

After 20 minutes of searching, reading, and note taking, the students are ready to share their new information with the entire class. As the students share their answers, Myra helps to guide them in giving a fully explained answer. Students who have not yet found their answers are assured that they will have more time to read until they are fully satisfied with their answers.

Content Goals

In this lesson, the students are focused on goals oriented toward the mastery of knowledge, in this case the ecology of wetlands. Each student develops his or her own questions that become personalized learning goals for the lesson. These questions are based on the individual interests of the children, which may be sparked by the experiment they performed, the field trip they attended, or the interesting book that caught their eye. Such content goals are intrinsically motivating. Children are intrinsically motivated to find an explanation to a question that intrigues them. Myra makes sure that the children have sufficient resources so that they understand that the goal is to discover a completely satisfying answer. A full answer to the question usually requires full understanding of multiple texts and of a complex network of knowledge by integrating information.

Myra's classroom orientation toward knowledge mastery is in stark contrast to one that emphasizes performance and competition, which are extrinsic incentives for motivation. She does not use rewards to rank one child's performance in comparison with that of another child. Instead, she posts all of the children's questions on a classroom chart and values every child's discovery of knowledge as a success. She tells the class that their goal for the lesson is to uncover knowledge so that all can learn more. Each student is therefore contributing to the class's fuller understanding of the ecological concepts found in the theme of the wetlands.

Choices

The students in Myra's classroom were enabled to make significant decisions during this lesson that affected their own learning. This element of choice encourages children to invest themselves more fully in their reading. The various supports for choice and student control increase motivation for reading.

In addition to these choices, Myra's students were given freedom at the end of the lesson to simply read the book they had chosen from beginning to end. This opportunity to read the text in depth is extremely important because it gives the children the opportunity to express their interests in related subtopics. Without the limitations of focusing on searching for the answer to a particular question, the fourth graders can read to gain valuable knowledge according to their own curiosities and to integrate conceptual understanding and factual information in the content domain.

Interesting Text

The abundance and variety of interesting texts play key roles in children's interest in reading. Number alone is not sufficient. The teacher makes it known to the students that the texts are there to help the students gain knowledge. Books are displayed on children's desks so that they are accessible to all students. Furthermore, the selection of texts is important to the students' reading motivation. Myra's texts are appealing to young students because of their vivid photographs and illustrations and the attractive layout of their information.

Social Collaboration

It is also important for students to work together to gain conceptual knowledge and to learn good reading strategies. In this lesson, students are given ample time to interact with one another to practice these skills by developing questions and searching for corresponding answers. Most students' intrinsic motivation for reading is increased when they can read together, share information, and present their knowledge to others. Although the students are assigned to work with one other partner most of the time, they are also encouraged to share their learning with other members of the class. This sharing emphasizes the collaboration of the class as a whole.

APPLICATIONS TO CLASSROOM PRACTICE

As verified in the literature review and meta-analysis and as illustrated in the preceding classroom vignette, several classroom practices increase motivation for reading. To motivate students within

classrooms, teachers often combine and merge these practices. For example, many teachers provide choices among different texts to read. Consequently, the principle of affording students' choice and providing interesting texts are merged. Frequently in reading instruction, teachers who are successful in motivating learners create content goals with an overall conceptual theme. This sustains subject matter awareness and makes reading purposeful. The content goals in such a conceptual theme can be linked to the purposes and texts for reading. Simultaneously, in learning about content through reading and writing, teachers often facilitate collaboration among pairs or teams of learners. Such collaborating fosters intrinsic motivation, especially if it is connected to other classroom practices for motivation.

It is vital to recognize that as important as intrinsic motivation, extrinsic motivation, and self-efficacy are for reading comprehension, they are not sufficient for successful reading instruction. To enable students to improve in reading comprehension, teachers must foster the development of vocabulary, comprehension skills, and related writing activities. A motivated reader is not likely to automatically gain these complex cognitive competencies independently. The unmotivated reader, however, is quite unlikely to gain these reading competencies at all. Therefore, motivation is a necessary part of a comprehensive plan for reading instruction that ensures growth in reading comprehension.

CLOSING

We have explained four classroom practices in reading that improve and expand children's motivations for reading: using content goals for reading instruction, providing a range of choices in reading activities, affording students interesting texts for reading instruction, and ensuring collaboration for reading in the classroom. These practices are all supported by experimental evidence. This evidence represents a base for building long-term reading motivation in schools. It should be recognized that teachers engage in many practices intended to motivate students, including the following: reading aloud, posing questions, modeling their own curiosity, rewarding students' success, encouraging expressive reading, linking writing to reading activities, and tailoring instruction to individual student needs.

Although these may be likely to foster motivation, they have not been examined experimentally to date. We can expect that they will be investigated in the future and may be useful additions to the collection of effective research-based practices for motivation. At present, however, it is clear that reading comprehension, which requires direct teaching of such elements as vocabulary and cognitive strategies, is also increased through engagement-supporting practices in the classroom. When students are deeply engaged in text interaction and motivated to understand over lengthy periods of time, their achievement in reading comprehension increases (Guthrie & Wigfield, 2000).

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