Motivating Children to Read and Write: Using Informal Learning Environments as Contexts for Literacy Instruction

Michael Putman and Carolyn Walker

Ball State University, Muncie, Indiana

The current focus on measurable reading achievement in clearly defined areas, such as fluency and comprehension, has resulted in reduced attention toward motivation and affect in relation to literacy learning. However, motivation is a significant component within literacy instruction due to the link between motivation and action. It is important that researchers continue to investigate methods to help stimulate engagement and motivation in reading. This study examined children's motivation to read as preservice teachers in informal learning environments tutored them. Quantitative and qualitative data revealed an increase in motivation from the beginning of the tutoring program to the end. Further analyses utilizing two subscales of the primary instrument (used to measure motivation) revealed a significant increase in self-concept regarding reading, but no significant difference was noted on students' value of reading.

Keywords: informal learning environments, literacy, motivation, self-concept, tutoring

Today's emphasis on cognitive outcomes and achievement in literacy has resulted in a climate that often does not consider a fundamental question: What motivates children to read? The implications of failing to consider this question are ominous, as notable researchers in the field of literacy have acknowledged the critical role that motivation plays in learning and behavior (e.g., Gambrell, 1996; Guthrie & Wigfield, 2000). Still, Edmunds and Bauserman (2006) noted that the number of studies that have examined motivation and literacy are "relatively few" (p. 414). To more fully understand the role and relationship between motivation and students' actions, and to ultimately develop approaches for literacy instruction that provide motivational opportunities for children, we need to continue to investigate ways to stimulate children's interest in reading.

One area to consider in the study of reading and motivation is literacy experiences in nontraditional contexts, also known as informal learning environments. Informal learning environments encompass such locations as gardens, cultural centers, and museums, which can provide authentic opportunities for literacy engagement through a variety of integrated instructional experiences (Pumpian, Fisher, & Wachowiak, 2006). Such programs as School in the Park (see Mathison, Wachowiak, & Feldman, 2007) and Monsters in the Museum (see Castley &

Meyers, 1995) have proven to be valid and beneficial instructional contexts that support various theories of learning, including multiple intelligence theory (Gardner, 1999), and motivate children at the same time (Pumpian et al., 2006). As these types of programs emerge as alternatives to traditional school settings, more research is needed to assess various settings and to note their impact on children's motivation.

The purpose of this investigation was to examine changes in motivation of students participating in a literacy-focused tutoring program that occurred in informal learning environments, including a museum and a cultural center. The following question was addressed: What is the impact of instruction occurring in the context of informal learning environments on children's reading motivation?

PERSPECTIVES ON MOTIVATION

Motivational Systems Theory

Ford's (1992) motivational systems theory (MST) proposed a top-down approach to identify motivational phenomena that are assumed to occur in idiosyncratic patterns. To explain motivation, the theory initially examined the whole person within the environment surrounding the individual, and then progressed to the motivational subprocesses within the individual to explain actions. Central to Ford's theory was the idea that "achievement and competence are the result of [a] motivated, skillful, and biologically capable person interacting with a responsive environment" (p. 70).

MST recognized three distinguishing characteristics of motivation. It is part of the biological makeup of the individual, it is focused on the future, and it is constantly being evaluated and monitored (Ford, 1992). Consequently, individual actions are determined according to the ability to focus on three essential components: goals, emotions, and personal competency beliefs. MST posited that motivational patterns are typically enduring but acknowledged that motivational patterns can be modified when exposure to the correct setting occurs. This setting, referred to as a responsive environment, facilitates progress toward an identifiable goal and creates feelings of competence. It encompasses a variety of contexts, including school and home, with the key factor being the provision of opportunities for development.

Individual motivation also can be enhanced through contact with an individual acting in the role of facilitator (Ford, 1992). To maximize the effects on motivation, the facilitator must fulfill a variety of functions inherent in the three motivational components to ensure that long-term motivational outcomes are achieved. MST stressed the importance of assisting in the activation of a goal that is personally important and optimally challenging to the individual to maximize motivation. It is also important for goals to be aligned, possibly toward achieving a more distant goal. Finally, it is beneficial to promote incremental change to aid in the provision of necessary short-term feedback, which maximizes personal agency beliefs and assists in promoting continued motivation to act.

Literacy and Motivation

Although the cognitive aspects of reading, such as comprehension and decoding, are universally acknowledged as vital components within the overall process of learning to read (see National

Reading Panel, 2000), motivation also has been noted as a critical factor in student success. According to Marinak and Gambrell (2008), "Most educators agree that motivation plays a central role in literacy development" (p. 9). This role manifests itself within the amount of reading completed by a student (Fawson & Moore, 1999; Pavonetti, Brimmer, & Cipielewski, 2002; Taylor, Frye, & Maruyama, 1990). Motivated children read frequently, and, subsequently, demonstrate improvement in skill level and achievement (Stanovich, 1986; Wang & Guthrie, 2004). In one study that examined motivation as it related to the amount of reading completed by third- and fifth-grade students, researchers concluded, "One of the major contributions of motivation to text comprehension is that motivation increases reading amount, which then increases text comprehension" (Guthrie, Wigfield, Metsala, & Cox, 1999, p. 245).

On the other hand, children who are unmotivated read less than their motivated peers (Guthrie, Wigfield, et al., 2006; Stanovich, 1986). This effect appears early in students' academic careers, possibly as soon as first grade (Chapman, Tunmer, & Prochnow, 2000; Morgan, Fuchs, Compton, Cordray, & Fuchs, 2008). The results are long lasting, as the lack of motivation has been shown to have detrimental effects on later reading ability (Chapman et al., 2000; Quirk & Schwanenflugel, 2004).

Concept-oriented reading instruction (CORI) has been the most extensively examined program with respect to motivation. CORI is a combination of reading, writing, and science instruction that involves the use of authentic, concrete observations of a scientific nature to create student curiosity and interest (Guthrie, Wigfield, & Perencevich, 2004). Analyses of CORI have shown increased intrinsic motivation in students, followed by increases in strategy use and frequency of reading (see Guthrie & Cox, 2001; Guthrie et al., 2004). In a recent meta-analysis of research using CORI, Guthrie, McRae, and Klauda (2007) found that the program produced moderate to large effect sizes on several variables, including self-efficacy and amount of reading, that are positively correlated with motivation.

Researchers cite several factors within CORI that help create engaged (intrinsically motivated) readers, including opportunities for student choice (autonomy support), use of interesting texts, collaboration, and hands-on activities (see Guthrie, Hoa, et al., 2006; Guthrie & Wigfield, 2000). These factors are reminiscent of the characteristics noted by Turner and Paris (1995), who suggested that motivation is enhanced through optimally challenging tasks, shared decision making (control), support for constructing meaning, and a focus on outcomes (consequences). These factors are also consistent with the several tenets of MST (Ford, 1992).

The notion of student choice is an important one. Schiefele (1991) concluded that when students were allowed to self-select reading material, they demonstrated greater effort in comprehending material. The more influence the student feels she has, the more that learning becomes personally relevant as curiosities are examined and explored. Additionally, the effects of choice are enhanced when children are given access to interesting text, materials, and/or multimedia (Wigfield & Tonks, 2004).

Research by Hidi and Harackiewicz (2000) concluded that motivation sparked through the use of situational interest could be used as a hook to "catch" students' interests. Thus, students become motivated to learn more about a subject when given the choice to do so. Situational interest also can be enhanced through the use of interesting texts or within the provision of hands-on activities. To extend situational interest and lead to individual interest, teachers should identify and create the environmental supports necessary to

increase the frequency of opportunities for situational interest to develop within the conditions outlined by researchers (see Guthrie & Wigfield, 2000; Guthrie, Wigfield, et al., 2006; Krapp, 2002).

Contexts for Literacy Instruction

Although the majority of K-12 literacy instruction occurs inside elementary classrooms in public, private, or charter schools, "Creating environments that stimulate situational interest is one way for schools to help motivate students and help them make cognitive gains" (Hidi & Harackiewicz, 2000, p. 156). Certainly, this environment can occur in traditional classrooms; however, as Duke, Purcell-Gates, Hall, and Tower (2006) noted, "Learning occurs best when the learning context matches the real functional context" (p. 345). Students engaged in the authentic literacy activities found in these functional contexts demonstrated more growth in writing and comprehension than did students in traditional classrooms (Duke et al.). The key provision in these contexts appears to be the use of "real-life" text, as opposed to text that is typically used in a "learning-to-read-or write" situation.

Research has revealed that these conditions for literacy instruction can be created in nontraditional contexts. One example is Monsters in the Museum, a summer program run by the Staten Island Children's Museum and the Learning Institute of the Jewish Community Center on Staten Island (Castley & Meyers, 1995). The program, which integrated interactive exhibits on natural sciences and humanities, included individual reading; mini-lessons on comprehension; a related task on drawing, writing, or reading; and positive reinforcement. The eight students selected for the program also participated in a reception at the end of the experience in which they viewed videos they created to share information about the program. Although the data was informal, children reacted positively, and observed behaviors included "the pride of authorship, [and the understanding] that words have a special power, and group efforts can be very rewarding" (Castley & Meyers, 1995, p. 31).

Another example of instruction within a nontraditional context is School in the Park (Mathison et al., 2007). School in the Park was created through a partnership between Rosa Parks Elementary School, San Diego State University, and Balboa Park, a facility with 10 museums. Serving 800 students from the inner city, the program focused on providing students with opportunities to build meaning through hands-on, active experiences, paying particular attention to the overall learning environment. It has proven that instruction can be innovative, with children playing an active role in decision making, and that it can successfully engage students in motivational and interesting learning that promotes functional and purposeful literacy that meets academic standards.

Programs that incorporate the techniques, approaches, and multiple forms of literacy often found in informal learning environments allow children to experience content learning in an engaging and transformative manner. With support, modeling, and scaffolding, children have opportunities to engage in meaningful literacy activities. Although these programs are certainly not as prevalent as those traditionally found in schools, they provide contexts necessary to engage learners and increase motivation (Ford, 1992). As similar programs emerge offering instructional alternatives, more research is needed to assess various settings and to note their impact on children's motivation. The current study was undertaken to address this need.

METHOD

Participants and Context

Participants for this study included 22 children, ranging in age from 7 to 12 years, involved in a tutoring program offered through a midsize university located in the Midwestern region of the United States. The group was composed of 10 girls and 12 boys, each of whom demonstrated the need for assistance with reading in some capacity, including word recognition, comprehension, and fluency. Although student participation in the program was voluntary, all of the children involved in this research were enrolled in the program at the request of parents or through referrals made by reading teachers or specialists working with the children at schools near the local university.

Tutoring took place in two main settings: the university building where the university art museum and geology department were located and a regional cultural and nature center located in the community. The university art museum contained a variety of art, including sculptures, paintings, drawings, and such anthropological artifacts as African masks. In addition, a temporary, interactive art exhibit, titled "Engaging Technology," was available to the participants during the study. This exhibit featured several components, including televised text, robots that sense human presence, and an interactive time line that informed students about the history of "Intermedia" and the artists associated with this work. The university geology resource area included fossils, rocks, casts of dinosaur bones, and photographs of geological phenomenon with accompanying information.

The second setting (the regional cultural and nature center) was structured partially as a museum and also had homes and gardens on the property that included exhibits and provided contexts for educational experiences. Exhibit and nature spaces included such materials as casts of dinosaur bones and fossils, and representative ecosystems. Exhibits inside the museum included child-oriented exhibits as well as those designed for adults. At the time of the study, the cultural center featured an exhibit, titled "Children Just Like Me," that highlighted information about children from different cultures. A pamphlet offered at the exhibit included areas for responses to questions as well as sections for stamps that could be obtained after reviewing information about children from different cultures.

Print, including labels, directions, and informational plaques, was embedded in a number of exhibits within each location and was used to understand and interpret the exhibits. Additional materials, such as books and self-generated writing, were made available to the children by the tutors associated with the program. Computers with Internet access also provided opportunities for children to interact with text, as the children and tutors used them to access information from various Websites, including those of other national and international children's museums.

Procedures

The activities described in this research were scheduled and conducted within one academic semester on the university calendar. Prior to the start of tutoring sessions, the tutors, all of whom were preservice teachers enrolled at the university, engaged in university coursework focused upon reviewing concepts of effective literacy instruction. Content within the course also

included training in the administration of diagnostic assessments, such as informal reading inventories, writing samples, and attitude and motivation surveys. The university instructor who supervised the tutors provided guidance regarding the incorporation of resources from the alternative settings within the tutoring sessions, based on children's interests and explorations. Modeling and examples were provided in how to work with children in selecting areas of interest, plan lessons that incorporated elements of the museum/centers, and focus on the students' motivation. Tours of the museum, geology resource area, and cultural center were provided to the tutors to assist them in understanding resources available to them in each setting.

Tutors and children met for an hour, two times a week, for a period of 10 weeks. Initial sessions focused upon building relationships and assessing the children's strengths and weaknesses through such activities as walking with the children through exhibits and reading signs, directions, and information. As part of these initial sessions, the tutors were instructed to read to the children and work with them to explore print-related items.

Prior to beginning the instructional activities that made up the tutoring, the tutors assessed the children's motivation through the administration of the Reading Survey portion of the Motivation to Read Profile (MRP) (Gambrell, Palmer, Codling, & Mazzoni, 1996). The Reading Survey consists of 20 questions with a 4-point response scale. Scoring is completed with the most positive response for each question being awarded four points, for a maximum score of 80. The total for all 20 questions represents a general score for motivation for reading; however, the survey is also designed to measure two specific aspects of motivation: self-concept (10 items) and value of reading (10 items). Questions addressing self-concept give insight to the reader's self-perceptions of competence and skill relative to others, whereas value of reading is measured through information gained about the reader's frequency of engagement in literacy-related activities. Reliability coefficients range from .68 to .82 for the scale. Administration is designed to take 15 to 20 minutes, with the questions being read to the students to ensure maximum accuracy.

Tutors developed and taught lessons in reading and writing that related to the exhibits and were based on children's needs and interests. Lessons served a number of functions, including general improvement of reading skills, developing an understanding regarding a particular aspect of an exhibit, and applying information learned to study alternate content. Literacy-related activities that incorporated elements or information from the informal learning environments included reading materials with content related to exhibits, writing creatively about artifacts observed or created by the student, and following verbal or written directions within the context of completing hands-on experiences. Specific examples included reading books about dinosaurs following the observation of fossils; developing informational (display) plaques for self-created artifacts, such as anthropological masks and artwork; and writing directions for a game developed after visiting an exhibit at the cultural center. Exhibits and artifacts in the alternative settings were revisited when necessary to reevaluate interests, and instruction was adapted to incorporate new or additional activities and provide constant engagement.

Tutors were required to write reflections on tutoring activities and students' success with various instructional approaches and activities. They considered and addressed student behaviors during reading, their interest and engagement, and needs or areas to work on in the future. At the end of the 10-week tutoring program, motivation was assessed a second time by using the Reading Survey of the Motivation to Read Profile.

Data Analysis

Data sources included the Motivation to Read Profile and the tutors' written reflections. Data analysis was quantitative and qualitative. Quantitative analysis included the computation of descriptive statistics and paired samples *t* tests on the total motivation score, as well as the subscales that measured self-concept and value of reading. Qualitative analysis included examination of tutor reflections to determine themes regarding children's motivation, including examples to illustrate information about changes in children's motivation (Goetz & LeCompte, 1984; Marshall & Rossman, 2006). Open coding of the tutors' reflections was utilized to develop hypotheses for changes in children's motivation. Categories and typologies were formed and refined through repeated examination of data and testing of hypotheses (Goetz & LeCompte, 1984). Instances that did not fit hypotheses and categories were clarified or changed if necessary (Goetz & LeCompte, 1984).

RESULTS

Quantitative Analysis

The paired samples *t* test on students' motivation scores on the Motivation to Read Profile revealed a statistically significant increase in MRP scores from pretest, $M = 56.45$, $SD = 6.93$, to posttest, $M = 60.55$, $SD = 8.31$, $t(21) = -2.93$, $p < .01$. Subsequent analyses of each of the subscales of the MRP using paired samples *t* tests also were conducted to evaluate the change in self-concept and value of reading. A statistically significant difference in self-concept scores was revealed from the pretest, $M = 25.68$, $SD = 4.06$, to posttest, $M = 28.55$, $SD = 4.27$, $t(21) = -3.14$, $p < .01$. No significant difference was noted from pretest ($M = 30.77$, $SD = 4.65$) to posttest ($M = 32.00$, $SD = 5.07$) for students' value of reading.

Qualitative Analysis

Tutors' comments that reflected an increase in children's motivation for reading within the alternate contexts emphasized engagement with the materials that were found within the various settings and the importance of incorporating activities that were literacy related, but not specifically identified with reading. Overall, analysis revealed three themes: engagement with materials, self-selection of subject/content, and nontraditional literacy activities.

Engagement with materials.   The tutors' written reflections revealed that the materials within the various settings helped motivate the children. As interests in the materials were noted, they were utilized as an opportunity to connect the materials to literacy and reading. One tutor wrote, "The students liked viewing the fossils in the museum, then reading about fossils in an informative picture book. . . . The student felt more connected to the subject or topic we were reading about when they could have a real-world connection." Another described instruction conducted in the art museum:

[The student] was intrigued by the art museum, and loved fairies and princesses. . . . One lesson I did was to have [the student] read directions . . . and drop "tokens" under different art pieces to

express her opinion about them. . . . This activity proved very motivating because she saw a purpose for reading.

Tutors used children's interests noted in the initial museum visits to introduce literature related to the exhibits before revisiting them to heighten interest and motivation. One tutor, in particular, noted, "I first saw the change [in motivation] when we read a book on dinosaurs and then looked around the fine arts building. . . . He was able to really learn and read the texts because of greater motivation."

Interest.   Students participating in the tutoring were motivated by the ability to select the subjects that were incorporated into the tutoring activities. One tutor wrote, "We also spent a lot of time in the museum looking at exhibits that really interested him . . . I really [think] that this helped motivate the student to read." Another tutor came to a similar conclusion:

> He was not excited about reading at the beginning or our tutoring, but when we exposed him to books that would be at his level and at his interest level, his motivation increased. For example, he was interested in art . . . so he chose books with those topics. Choosing these books helped him become more interested in reading.

The increased interest in certain topics was enhanced when it was introduced within the context of the alternate settings. One tutor shared:

> We did an activity on fossils in the [geography] resource area . . . and by reading some information about fossils, [the student] was interested enough to look into fossils a little more and even connected the fossils lesson to his love of Pokémon.

Nontraditional literacy activities.   Tutors noted students were engaged with reading when topics were integrated with hands-on activities or presented in a nontraditional format. A tutor commented:

> As we went along [in the museum] we found other subjects that he liked to read about as well. . . . He didn't realize that he was reading when he was actually heavily involved. After discussing this, I think that he was highly motivated because of the fact that it is not traditional reading.

The nontraditional format was especially noteworthy, as many tutors expressed that students seemed to enjoy reading more when they were not reading from a book. One tutor stated, "We found that if we had him read things that were not in a regular book format, he really enjoyed it."

In addition, students were motivated by hands-on activities that were completed in conjunction with, or sometimes in place of, activities that children associated with reading. A tutor wrote, "[The student] seemed to really like all hands-on activities and dinosaurs. . . . It sometimes was as if she didn't realize that she was reading." Another corroborated the effects of linking hands-on activities by commenting, "The more activities we did, the more motivated she became. . . . [A]ny type of hands-on activity, like quilt-making or planting flowers, made her extremely motivated to read." One tutor summarized the importance of linking literacy with hands-on activities when she wrote, "We found that the student we tutored became more motivated when the lessons incorporated reading and writing activities that were partnered with hands-on activities. The student particularly liked an activity where we incorporated items in the museum."

Finally, in a statement that summarizes the broader purpose of conducting the activities within the alternate settings, one tutor wrote, "[The student] became more motivated when . . .

we incorporated items in the museum, children's literature, and model clay . . . [to create] models of fossils portrayed in the book and museum."

DISCUSSION

Valencia and Wixson (2000) noted that teachers are feeling increased pressure to motivate students to achieve academic success. Although research has produced a number of conclusions regarding reading and motivation, less is known about the influence of instructional context on children's motivation to read. To address this gap in the knowledge base, the researchers conducted the current study to assess the effects of instruction carried out in alternative settings on students' reading motivation.

The students who were tutored in the various instructional settings demonstrated increased motivation over the course of the study. Alternate contexts could account for this increase because of the text, artifacts, and exhibits contained in each and the opportunity to effectively link each of these within instruction. The artifacts and exhibits were essential for creating the situational interest addressed by Hidi and Harackiewicz (2000). This situational interest was reflected in the comments made by tutors that address using artifacts within the settings to capture student interest. Once the student was "hooked" on the topic, tutors were able incorporate this interest into the instructional tutoring.

Turner and Paris (1995) noted six features of open tasks that increase student motivation: choice, challenge, control, collaboration, constructive comprehension, and consequences. Each of these features was addressed within the tutoring and context presented by the informal environment, and the current results corroborate research by others (e.g., Powell, McIntyre, & Rightmeyer, 2006) that also noted positive effects on motivation and engagement when the features were present. One notable distinction from Paris and Turner's original conception of the features of open tasks was that collaboration occurred between the tutors and children, as opposed to interaction solely between students. Decision making was shared as the tutors and students worked together. This relationship, built upon equality, may have satisfied students' need to feel valued and understood by the teacher, which has been linked to increased motivation (see Guthrie, Hoa, et al., 2006).

Purcell-Gates, Duke, and Martineau (2007) posited that effective instruction occurs in a combination of "real-world" applications for reading, the use of engaging texts, and opportunities for students to choose their reading selections. Others have noted similar characteristics but also included the use of appropriately challenging tasks and active responding (see Bohn, Roehrig, & Pressley, 2004; Taylor, Pearson, Peterson, & Rodriquez, 2003). Although instruction was not a focus of this research, a similarity exists between what was noted as being important for instruction and strategies that have been shown to increase motivation. Each of these elements was included in the tutoring that occurred within the alternative settings, as the plethora of materials available allowed students to engage in authentic experiences with the text of their choice within the exhibits. The tutors were able to effectively translate these experiences into their instruction as they developed activities featuring literature at an optimally challenging level for the students.

Use of the Reading Survey portion of the MRP created an opportunity to examine children's self-concept and value of reading. The overall increase in self-concept may be due to the real-world reading experiences offered by the alternative settings. Children were able to connect their

abilities with opportunities outside of the traditional book format that is prevalent in schools and classrooms (see Duke et al., 2006). However, confounding this conclusion is the fact that the students' value of reading should have increased along with the self-concept as students began to grasp the relevance and importance of reading outside the classroom. A potential reason for this lack of increase with respect to the value of reading is that the tutoring did not include specific components directed at explicitly associating the activities conducted within the informal contexts to classroom lessons. Students may not have been able to make the connections necessary to traverse the perceived gap between out-of-school and in-school reading activities (Assor, Kaplan, & Roth, 2002). Emphasis on autonomy supportive practices, such as choice and the use of interesting content, is not enough—instruction also should focus on enabling students to see the connection between "real-life" reading and reading associated with school.

Limitations

This research presents positive results for using alternative settings to increase student motivation; however, several limitations need to be acknowledged. First, the small sample limits the generalizations that can be made to other samples of students. Second, proximity to the university and community centers allowed numerous opportunities to provide various experiences for the students in the sample. Schools may not have access to alternative settings or partners that would be willing to actively work with educational personnel. Finally, though qualitative information from the tutors provided valuable information, the lack of qualitative data from the students participating in the tutoring limits the strength of the conclusions. Researchers have inferred, however, that observers may provide an alternative point of reference for student motivation (see Guthrie, Hoa, et al., 2006).

Implications

Findings from this research illustrate that educational experiences in informal learning environments can increase children's reading motivation. However, several issues will need to be addressed concurrently to ensure these contexts are viewed as viable educational alternatives within overall literacy development. First, proponents of these contexts need to help educational stakeholders, such as parents and teachers, view such experiences as more than just field trips or opportunities for entertainment and enjoyment (see Eakle, as cited in Eakle & Dalesio, 2008). Certainly, prospects exist to develop situational interest through the enjoyment inherent within these experiences, which may be especially important for unmotivated or struggling readers, but there must be some specific educational value. Linking the hands-on experiences inherent within the setting to specific literacy practices or skills will facilitate this step and allow children to see the important link between real-world experiences and literacy (e.g., Purcell-Gates et al., 2007).

To ensure this occurs, the goals and purposes of informal settings must be aligned with those present in schools. The work completed by Eakle and Dalesio (2008) represents the first step in demonstrating that this is possible, as they have taken the power of the museum to the classroom to demonstrate various literacies in action. As they pointed out, however, "Diverse literacy practices are frequently overshadowed by education policies that attempt to restrict literacy to discrete print reading processes such as decoding word parts, scripted formulas, and to procedures

taught only within school walls" (p. 604). This means that those in informal settings must work closely with educators to ensure establishment of curricular goals that can be documented and measured.

Finally, in the era of accountability, educators must link instruction to improvements in achievement, which, to date, has not been forthcoming with respect to informal learning environments. This creates the necessity of looking beyond the positive evidence regarding affective variables to determine the impact of alternate settings on cognitive outcomes and the ways in which literacy instruction in informal learning environments can be translated or incorporated into classroom learning.

As we gain a deeper understanding of how to connect the affective benefits and the learning that is possible within informal learning environments with academic requirements, educators will be better equipped to support the literacy needs of all students. This will take a concerted effort by all stakeholders, but clearly the results will be worth the effort.

REFERENCES

Assor, A., Kaplan, H., & Roth, G. (2002). Choice is good, but relevance is excellent: Autonomy-enhancing and suppressing teacher behaviours predicting students' engagement in schoolwork. *British Journal of Educational Psychology*, *72*, 261–278.

Bohn, C. M., Roehrig, A. D., & Pressley, M. (2004). The first days of school in the classrooms of two more effective and four less effective primary-grades teachers. *The Elementary School Journal*, *104*, 269–287.

Castley, A., & Meyers, J. (1995). Monsters in the museum: Reading instruction in a children's museum. *The State of Reading*, *2*(1), 29–33.

Chapman, J. W., Tunmer, W. E., & Prochnow, J. E. (2000). Early reading-related skills and performance, reading self-concept, and the development of academic self-concept: A longitudinal study. *Journal of Educational Psychology*, *92*, 703–708.

Duke, N. K., Purcell-Gates, V., Hall, L. A., & Tower, C. (2006). Authentic literacy activities for developing comprehension and writing. *The Reading Teacher*, *60*, 344–355.

Eakle, A. J., & Dalesio, B. (2008). Museum literacies of a second-grade classroom. *The Reading Teacher*, *61*(8), 604–613.

Edmunds, K. M., & Bauserman, K. L. (2006). What teachers can learn about reading motivation through conversations with children. *The Reading Teacher*, *59*, 414–424.

Fawson, P. C., & Moore, S. A. (1999). Reading incentive programs: beliefs and practices. *Reading Psychology*, *20*, 325–340.

Ford, M. E. (1992). *Motivating humans: Goals, emotions, and personal agency beliefs*. Newbury Park, CA: Sage.

Gambrell, L. B. (1996). Creating classroom cultures that foster motivation. *The Reading Teacher*, *50*(1), 14–25.

Gambrell, L. B., Palmer, B. M., Codling, R. M., & Mazzoni, S. A. (1996). Assessing motivation to read. *The Reading Teacher*, *49*(7), 518–533.

Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century*. New York: Basic Books.

Goetz, J., & LeCompte, M. (1984). *Ethnography and qualitative design in educational research*. New York: Academic Press.

Guthrie, J. T., & Cox, K. E. (2001). Classroom conditions for motivation and engagement in reading. *Educational Psychology Review*, *13*, 283–302.

Guthrie, J. T., Hoa, L. W., Wigfield, A., Tonks, S. M., Humenick, N. M., & Littles, E. (2006). Reading motivation and reading comprehension in later elementary years. *Contemporary Educational Psychology*, *32*, 282–313.

Guthrie, J. T., McRae, A., & Klauda, S. L. (2007). Contributions of concept-oriented reading instruction to knowledge about interventions for motivations in reading. *Educational Psychologist*, *42*, 237–250.

Guthrie, J. T., & Wigfield, A. (2000). Engagement and motivation in reading. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Reading research handbook* (Vol. III, pp. 403–424). Mahwah, NJ: Lawrence Erlbaum.

Guthrie, J. T., Wigfield, A., Humenick, N. M., Perencevich, K. C., Taboada, A., & Barbosa, P. (2006). Influences of stimulating tasks on reading motivation and comprehension. *Journal of Educational Research*, *99*, 232–245.

Guthrie, J. T., Wigfield, A., Metsala, J. L., & Cox, K. E. (1999). Motivational and cognitive predictors of text comprehension and reading amount. *Scientific Studies of Reading*, *3*, 231–257.

Guthrie, J. T., Wigfield, A., & Perencevich, K. C. (2004). Scaffolding for motivation and engagement in reading. In J. T. Guthrie, A. Wigfield, & K. C. Perencevich (Eds.), *Motivating reading comprehension: Concept-oriented reading instruction* (pp. 55–86). Mahwah, NJ: Lawrence Erlbaum.

Hidi, S., & Harackiewicz, J. M. (2000). Motivating the academically unmotivated: A critical issue for the 21st century. *Review of Educational Research*, *70*, 151–179.

Krapp, A. (2002). Structural and dynamic aspects of interest development: Theoretical considerations from an ontogenetic perspective. *Learning and Instruction*, *12*, 383–409.

Marinak, B. A., & Gambrell, L. B. (2008). Intrinsic motivation and rewards: What sustains young children's engagement with text? *Literacy Research and Instruction*, *47*, 9–26.

Marshall, C., & Rossman, G. B. (2006). *Designing qualitative research* (4th ed.). Thousand Oaks, CA: Sage.

Mathison, C., Wachowiak, S., & Feldman, L. (2007). School in the park: Bridging formal and informal learning environments. *Childhood Education*, *83*, 206–210.

Morgan, P. L., Fuchs, D., Compton, D. L., Cordray, D. S., & Fuchs, L. S. (2008). Does early reading failure decrease children's reading motivation? *Journal of Learning Disabilities*, *41*, 387–404.

National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of scientific research literature on reading and its implications for reading instruction*. Bethesda, MD: National Institutes of Child Health and Human Development.

Pavonetti, L. M., Brimmer, K. M., & Cipielewski, J. F. (2002). Accelerated reader: What are the lasting effects on the reading habits of middle school students exposed to Accelerated Reader in elementary grades? *Journal of Adolescent & Adult Literacy*, *46*, 300–311.

Powell, R., McIntyre, E., & Rightmeyer, E. (2006). Johnny won't read, and Susie won't either: Reading instruction and student resistance. *Journal of Early Childhood Literacy*, *6*, 5–31.

Pumpian, I., Fisher, D., & Wachowiak, S. (2006). *Challenging the classroom standard through museum-based education*. Mahwah, NJ: Lawrence Erlbaum.

Purcell-Gates, V., Duke, N., & Martineau, J. (2007). Learning to read and write genre-specific text: Roles of authentic experience and explicit teaching. *Reading Research Quarterly*, *42*, 8–46.

Quirk, M. P., & Schwanenflugel, P. J. (2004). Do supplemental remedial reading programs address the motivational issues of struggling readers? An analysis of five popular programs. *Reading Research and Instruction*, *43*, 1–19.

Schiefele, U. (1991). Interest, learning, and motivation. *Educational Psychologist*, *26*, 299–323.

Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, *21*, 360–407.

Taylor, B. M., Frye, B. J., & Maruyama, G. M. (1990). Time spent reading and reading growth. *American Educational Research Journal*, *27*, 351–362.

Taylor, B. M., Pearson, P. D., Peterson, D. S., & Rodriquez, M. C. (2003). Reading growth in high-poverty classrooms: The influence of teacher practices that encourage cognitive engagement in literacy learning. *The Elementary School Journal*, *104*, 3–28.

Turner, J., & Paris, S. G. (1995). How literacy tasks influence children's motivation for literacy. *The Reading Teacher*, *48*(8), 662–673.

Valencia, S., & Wixson, K. (2000). Policy-oriented research on literacy standards and assessment. In M. Kamil, P. Mosenthal, P. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. III, pp. 909–935). Mahwah, NJ: Lawrence Erlbaum.

Wang, J. H., & Guthrie, J. T. (2004). Modeling the effects of intrinsic motivation, extrinsic motivation, amount of reading, and past reading achievement on text comprehension between U.S. and Chinese students. *Reading Research Quarterly*, *39*, 162–186.

Wigfield, A., & Tonks, S. (2004). The development of motivation for reading and how it is influenced by CORI. In J. T. Guthrie, A. Wigfield, & K. C. Perencevich (Eds.), *Motivating reading comprehension: Concept-oriented reading instruction* (pp. 249–272). Mahwah, NJ: Lawrence Erlbaum.