Metacognitive Functions, Interest, and Student Engagement in the Writing Process: A Review of the Literature

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Abstract: The purpose of this paper is to draw on research that discusses the relationship between interest and metacognitive functions and its effect on engaging students in the writing process. Results indicate students who are interested in their writing activities engage in metacognitive strategies, remain focused, and complete their tasks.

Today's fast-paced, global society demands that individuals demonstrate clear, concise, and effective written communication skills. Failure to address and remediate students' writing deficits can have a detrimental effect on their abilities to successfully transition from students to working adults. Educators must take a proactive approach in identifying students' interests and incorporating cognitive strategies that facilitate the writing process. Students' interest and motivation rest in their emotional involvement or connection to a topic. Student writers need to understand the purpose of their writing and relate it to practical experiences (Ainley, Hidi, & Berndorff, 2002). Writing is not an accidental process; it is a process that requires skills gained by conscious effort, extensive practice, and commitment to the writing task.

Students' difficulties in writing usually appear early in elementary school. By the time students reach middle school, their writing is often so poor that it does not adequately meet the needs of their grade level classroom (Lane, Graham, Harris, & Weisenback, 2006). As students advance from grade to grade, teacher expectations and national standards are heightened, making writing deficits more apparent. According to data released by the United States Department of Education in 2007, the writing performance of 68% of 8th graders and 75% of 12th graders is at or below basic levels (Livingston, 2008). It becomes increasingly difficult for students to catch up to grade level standards and rehabilitate their writing skills. Students' writing deficits range from mechanical difficulties to higher order cognitive difficulties (Schumacher & Deschler, 2003). Struggling writers lack the metacognitive awareness necessary to internalize the writing process and self-correct their work (Baker, Gersten, & Graham, 2003). Students who acquire metacognitive strategies can learn to efficiently apply them towards the writing process. Competent writers are aware of the processes of writing and devote time to each stage of the writing process. Proficient writers understand the strategies and planning skills necessary to develop an organized written product (Baker et al., 2003; Monroe & Troia, 2003; Schumacher & Deschler, 2003).

The purpose of this paper is to analyze how writing can best be understood as a volitional process and the capacity of interest in stimulating metacognitive functions. Specifically, this paper addresses the questions: How does interest stimulate metacognitive functions? What is the effect of interest on and elementary and secondary students' engagement in the writing process?

Method

The studies analyzed in this paper were selected based on the following criteria: participants were elementary or secondary students, the dependent measures were associated with academic and/or writing achievement and the independent measures involved metacognitive

strategies and/or interest-based activities. The search terms *cognition, metacognition, cognitive awareness, student interest, elementary students writing achievement, middle school students writing achievement* and *writing skills* were used to locate the studies using the Academic OneFile and OmniFile research databases.

Research on metacognitive functions in the writing process focused on three central themes that will be detailed below: (a) writing is a complex process that requires conscious effort and self-regulation, (b) students who were interested in their writing activities were more motivated to write and more likely to remain committed to the writing process, and (c) students who held positive beliefs about their writing were more likely to stay on-task and persevere through task completion.

Results

Self-Regulation in the Writing Process

The writing process is a multi-stage system of planning, organizing, and revising. Writing is as a volitional act which demands a high level of cognitive abilities, or thinking skills, as writers transfer information from one stage of the writing process to the next (Bruning & Horn, 2000; Becker, 2006). Skilled writers internalize the writing process by retrieving prior knowledge, connecting it to the given task, and sorting their thoughts before transferring them to paper (Baker et al., 2003). Internalizing the writing process involves metacognition, or the awareness of one's thinking as he or she is thinking. Pintrich and DeGroot (1990) reported a positive correlation between high levels of self-regulation and high levels of metacognitive strategies. Metacognition is triggered by interest, or affective states that stimulate strong feelings such as success and satisfaction, connected to past experiences (Flavell, 1979). Metacognition is comprised of a range of functions including metacognitive knowledge and metacognitive control. Metacognitive knowledge consists of three categories: strategic knowledge, knowledge about cognitive tasks, and self-knowledge. Metacognitive knowledge refers to awareness of metacognitive strategies. Metacognitive control refers to the actual use of the strategies (Pintrich, 2002; Pintrich & DeGroot, 1990).

Effects of Interest

Ainley et al. (2002) attributed student achievement to high levels of interest. Measures of topic interest, affect, persistence, and test scores were analyzed and indicated that interest in writing, as well as other academic tasks, was based on topic interest and individual interest. Students who were in engaged in topics of interest developed positive feelings, increased attentiveness, and heightened focus. Students who displayed interest in writing topics were more likely to remain committed to the activity and persevere through areas of difficulty. Students who were involved in interest-based activities were also more likely to explore the topic of interest independently.

Garcia and Caso (2004) found that students who are interested in their writing tasks are more focused and engaged. After implementing an intervention that revolved around interest-based, authentic activities, such as writing letters and recipes, and accompanied by direct, explicit instruction and the use of various graphic organizers, the researchers observed growth of students' productivity and coherence of written narratives. Students' attitudes about writing improved. Students were more satisfied with their completed work and achieved an understanding of the value of well written work.

Consistent with the findings of Garcia and Caso (2004), Katz, Assor, Kanat-Maymon, and Bereby-Meyer (2006) found that interest-based activities helped students stay on task. Their research focused on the relationship between interest, motivation and performance feedback. The

results of the study indicated that students with high levels of interest were more motivated, regardless of positive or negative performance feedback. Students were more willing to follow through with task completion. Students approached low interest activities with pessimism and non-compliance. In contrast, interest-based activities motivated students, even when learning conditions were not desirable.

Smith, Rook, and Smith (2007) compared the effects of cognitive, metacognitive, and affective questions on learning outcomes. Cognitive questions referred to the acquisition of knowledge through answering text-related questions. Metacognitive questions required students to address their own learning styles in their answers. Affective questions were related to students' background experiences. The outcomes of two experimental groups were compared to those of the control group which did not receive any questions. The data indicated greater learning gains made by the two experimental groups who were given cognitive, metacognitive, and affective questions.

Results of a study conducted by Monroe and Troia (2006) supported earlier research conducted by Garcia and Caso (2004) and Katz et al. (2006). Monroe and Troia (2006) reported that students who wrote about topics that interested them were more willing to engage in the writing process. Students were instructed to write about topics that interested them. They were taught multiple strategies for planning, revising, and self-regulating their work. All the students showed gains in their post test results. The weakest writers showed the greatest gains. The lack of restriction in choosing writing topics redirected students' focus on their writing difficulties onto learning the necessary strategies.

Positive Beliefs and Perseverance

Students who held positive beliefs about their writing abilities and understood the function of writing were motivated and connected their writing achievement to their efforts. Students who were interested in writing were more persistent and produced well-organized, more logical essays than unmotivated, disinterested students (Bruning & Horn, 2000). Students who viewed themselves as good writers were more likely to engage in the writing process than students who viewed themselves as poor writers. Socio-cognitive variables heavily impacted students' feelings towards writing. Students' sense of self-efficacy and ability to efficiently gather cognitive, motivational, and linguistic resources affected the way they approached writing tasks.

Discussion

The studies analyzed in this review indicate a positive correlation between metacognitive functions, interest, and task engagement. Writing is a choice. This choice is influenced by interest. Students, who engage in writing activities they perceive as appealing, submit themselves to the writing process and view it as more than an academic function. Restrictions on writing activities interfere with students' abilities to produce quality work (Garcia & Caso, 2004). Students who experience an emotional connection to a given task are able to monitor their use of metacognitive strategies and remain focused on a task.

Students who engage in metacognitive strategies are more likely to remain engaged in a task and persist through its completion. Students who engage in metacognitive control through the use of self-regulation strategies place value on their class work and demonstrate a willingness to comply with classroom norms (Pintrich & DeGroot, 1990). Interest-based writing activities keep students engrossed and eager to explore new information related to their interest. Furthermore, students who engage in interest-based activities are more satisfied with their end

performance (Katz et al., 2006). The proper writing strategies can help students feel anxiety-free about their writing abilities and transcend negative experiences associated with writing.

Conclusions and Implications

Catering to students' interests stimulates metacognitive functions and fosters active engagement in the processes of writing. Metacognition and metacognitive knowledge facilitate the writing process as metacognitive control enhances development of writing skills. Through conscious effort, students' intrinsic desire to produce quality writing can eclipse the need to achieve academic success Armed with the proper strategies and guidance, struggling writers can become competent writers. Educators are knowledgeable in how to implement learning strategies, but lack clear understanding of metacognitive processes and how metacognitive skills are developed (Kuhn & Dean, 2004). Psychologists are versed in metacognitive theories, but do not have sufficient opportunities to transfer theory into practice in classroom settings. Collaborative efforts between educators and psychologists are necessary to connect ideas and set goals for helping students acquire critical thinking skills. Educators and psychologists need to come to an understanding of metacognition and its applications in the writing process. Educators who are versed in metacognitive functions can provide struggling writers with explicit instruction of metacognitive strategies. Teaching metacognitive strategies, such as self-regulation via goal-setting and self-monitoring, are effective in helping students internalize the writing process. Self-knowledge of strengths and weaknesses enables students to adjust their metacognitive strategies and increase their opportunities for writing success (Pintrich, 2002).

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