

How to Generate Interest So Reading Comprehension Improves

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February 2011

In this brief, “interest” is described as a motivational force that involves the focused allocation of extra attention, leading to deeper processing, better comprehension, longer recall. I explain how a situational interest can become an individual interest and how interest is related to curiosity, self-efficacy and knowledge. Several ways to prompt interest are outlined and a sample survey is provided. Finally, I distinguish interest from other motivational variables such as choice, discussion and enjoyment. This piece draws from experimental and theoretical research and applies to all subject areas and all ages.

Interest Motivates the Reader

Based on a growing body of experimental work spanning three decades, Suzanne Hidi defined *interest* as “a unique motivational variable, as well as a psychological state that occurs during interactions between persons and their objects of interest, and it is characterized by increased attention, concentration and affect” (2006, p. 70). Interest is a motivational variable that involves not only the emotions but also the intellect, making it a powerful energizer indeed (Hidi, Renninger, & Krapp, 2004). Motivation is an important aspect of instruction and assessment. Kamil, Borman, Dole, Kral, Salinger, and Torgesen (2008) included motivation as one of five key recommendations for improving adolescent literacy (and see Biancarosa & Snow, 2006). Interest may serve to jumpstart the struggling reader — in any subject area — because when we are interested we are attentive and focused. Such focus often results in better strategy use, prompting inference facilitation, and yielding qualitatively deeper levels of comprehension and more reliable retrieval of information (Hidi, 1990, 2001a; Schiefele & Krapp, 1996). After experimenting repeatedly with the effects of interest on reading, Hidi concluded, “Interest has a strong positive influence on readers’ comprehension and recall” (2001a, p. 195; see also Schraw, Flowerday, & Lehman, 2001).

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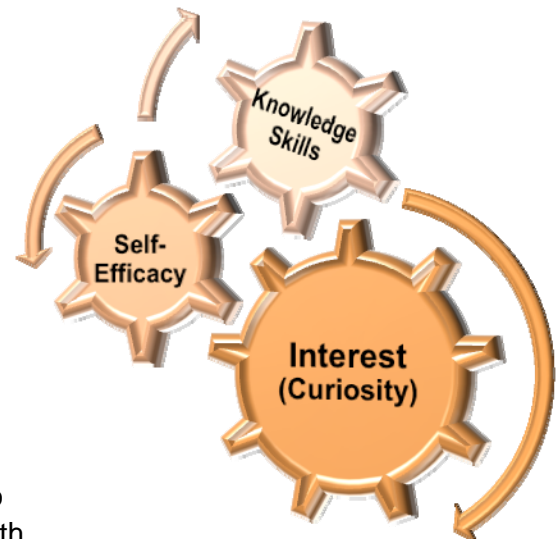
How Interest Looks and Feels

If something is interesting, we actively attend to it, and that inner focus is outwardly manifested in an intent gaze, puckered brow, qualitative change in pitch (for example, we might sound excited or awed), and/or a body shift towards the object of interest (Hidi, 2006, Silvia, 2008a, 2008b). This rapt absorption is seen in a young child, for example, constructing a submarine from a cardboard box, paying scant attention elsewhere, and in the adolescent reading at the airport, ignoring all distractions. When interest is engaged, emotion and cognition are engaged, albeit not necessarily in equal measure. Experiments with adolescents showed that the combined influx of emotional and intellectual energy fuels the reader or writer to persist, even when the task becomes increasingly challenging (Ainley, Corrigan, & Richardson, 2005; Ainley, Hidi, & Berndorff, 2002). When in an interested state of mind, extra cognitive effort does not feel like extra work: “Although focusing attention and continuing cognitive engagement normally require increased effort, when interest is high these activities feel relatively effortless” (Hidi, 2001b, p. 7712).

Interest as Curiosity, Fostered by Self-Efficacy and Knowledge

Interest seems to be largely curiosity. Cognitive scientist Daniel Willingham (2009) writes about the relationship between curiosity, thinking and learning, urging teachers to find ways to prompt curiosity. Emotion psychologist Paul Silvia calls interest “The Curious Emotion” and groups it with other hypothesized knowledge-based emotions, including surprise and awe (2008a). In his experiments, Silvia measured how interest and self-efficacy interact. Self-efficacy refers to the degree to which we feel capable of coping or performing well in a given context or activity (Bandura, 1997). When Paul Silvia asked college students to work with complex poetry, complex geometrical puzzles, and abstract art he found that too much self-efficacy inhibits interest, but too little self-efficacy also inhibits interest. We are more interested in a task when it is not perceived as too easy or too hard. Next, to find out whether he could manipulate interest through self-efficacy, Silvia showed the students how to interpret abstract art: As expected, interest in abstract art increased, as measured by how long the students perused particular paintings in a gallery, compared to pre-lesson perusal time. The implications for teaching in any subject area are apparent — we help students develop interest by helping them develop self-efficacy for that topic. Self-efficacy is fueled by success and overlaps with knowledge and skills. A century ago Thorndike stated, “Knowledge breeds interest...as soon as the high-school pupil can really read German, he is likely to gain an interest in it” (1906, p. 53; also see Kintsch, 1998).

Figure 1. Knowledge and self-efficacy stoke interest.



Situational Interest and Individual Interest

Researchers describe two types of interest: A *situational interest* is short term and momentary, but an *individual interest* develops over time. Situational interest can be prompted daily, in every subject area, but we tend to develop only one or two individual interests at a time. Both types of interest have been shown to positively influence learning (Hidi, 2001a, 2006). Both types are context-specific: We are not interested in all things; we are interested in a specific context, a specific topic, activity, genre, etc.

If our initial situational interest is nurtured, it may develop into a long-term individual interest. This can happen as early as preschool — consider the young paleontologist, expertly rattling off every type of dinosaur at age four (Johnson, Alexander, Spencer, Leibham, & Neitzel, 2004; Renninger & Wozniak, 1985). Conversely, if an emerging interest is ignored, it is likely to wither (Hidi & Renninger, 2006). It is counterproductive to allow a positive individual interest to wane: We build well-organized knowledge structures around our interest, including knowledge of the vocabulary for that topic. This welling supply of knowledge—this growing array of interconnected ideas—becomes a valuable mental resource that further motivates us and helps us think more deeply (Hidi, 1990). Once we become interested in a topic, we tend to seek out more information. We become, in short, budding experts, and we experience a changing sense of identity (Alexander, 2004; Krapp, 2007).

Even for topics of which we have little knowledge and no individual interest, under the right circumstances teachers can prompt a short-term situational interest so that students demonstrate spontaneous curiosity and knowledge-seeking behavior. If a situational interest is supported it may

become an individual interest. All individual interests grow from a situational interest, nourished over time until firmly “caught” and held (Alexander, 2004; Hidi & Renninger, 2006; Krapp, 2007; Silvia, 2008b).

How to Prompt and Support Interest

Teachers can prompt a spontaneous situational interest and/or nourish a long-term individual interest through the following elements. Many of these elements overlap. Some apply more to situational interest than to individual interest, but they all apply to both types of interest. This list is not exhaustive, but it represents well-documented findings (see Schraw, Flowerday, & Lehman, 2001, for a review).

- + **Curiosity:** Provide a mystery, a puzzle, a provocative question or a secret.
- + **Surprise:** Provide the unexpected, a surprising plot twist or a surprising fact.
- + **Novelty:** Provide something unusual, different, new, including artifacts.
- + **Relevance:** Is the topic (or character) relevant to the student(s)? How does it relate to them?
- + **Complexity:** Provide something that is multilayered, having circles within circles or patterns upon patterns. The mind seeks to find patterns and relationships, but the task must not too far exceed the student’s reach. Repeated frustration will inhibit interest.
- + **Prior Knowledge:** Develop topic knowledge. Provide a variety of topic-specific learning materials, of increasing difficulty level, over time. Students who know more about a given topic are more likely to become interested in it. Alternatively, if a student is asked to read from a text that assumes too much prior knowledge, and thus requires a lot of inference, interest and comprehension are apt to suffer (Kintsch, 1998; Tobias, 1994).
- + **Explicitness and Coherence:** (A solution to limited background knowledge.) Look for texts that do not assume prior knowledge, but instead are written in a more complete and explicit style, and with more coherence across statements, using transitions, etc. Text coherence, text completeness, and prior knowledge were found to be important scaffolds for comprehending fourth and fifth grade social studies texts (Beck, McKeown, Sinatra, & Loxterman, 1991; see also Schraw, Bruning, & Svoboda, 1995; Schraw, 1997).
- + **Purpose:** This type of task will “fabricate” interest to help readers focus attention, where they might otherwise feel adrift in a sea of words. Prompt a text-hunt by asking “who, what, where” questions. For example: “Scan the next three pages and list all the major characters involved in the French Revolution to this point in the chapter” or “Read this section and list all the materials Edison attempted to use for his filament.” (For more ideas, see Schraw & Dennison, 1994; Ozgungor & Guthrie, 2004).
- + **Perspective:** This type of reading task helps focus attention and interest on a certain character. For example, discuss *Paul Revere’s Ride* in small groups, where Partner A tells what Paul Revere might have been thinking, seeing and feeling, Partner B plays the noble steed, Partner C takes on the perspective of Paul’s co-conspirator in the belfry, Partner D is the farmer, woken from sleep, and Partner E is a Redcoat (for more ideas, see Schraw, Flowerday, & Lehman, 2001).

+ Discussion: Topic-specific peer conversation has been found to promote interest and learning in third graders (Guthrie, Hoa, Wigfield, Tonks, & Perencevich, 2006) and in adolescents (Hidi, Berndorff, & Ainley, 2002). In an experiment with college students, Thoman, Sansone, and Pasupathi (2007) determined that topic-specific conversations during a computer lab activity promoted interest, but this applied the most to Latinos and individuals who scored higher on the *Relational Self-Constraint scale*. Students who felt they were listened to in a responsive manner during the activity reported significantly higher levels of interest than those who felt their lab-partner was distracted. Furthermore, ongoing topic-specific conversations, measured weeks later, significantly predicted sustained interest.

+ Interest-Alignment: Align texts and tasks with the student’s interest to leverage comprehension. Use a survey to find out what interests each student, as shown below, for example. In a notable case study, Renninger, Ewen, and Lasher (2002) showed that 11-year olds dubbed as struggling readers performed better than expected on a task involving math story problems and another task involving comprehension of informational text when the researchers adjusted the content to reflect the student’s individual interest (e.g., fishing).

+ Surveys: Survey the students to determine which topics interest them and how much they already know about the topic. Build on those interests. According to Ainley et al. (2005), use a 5-point Likert scale to measure interest. A sample survey is provided in Table 1, measuring knowledge and interest for a natural disasters unit. Note that students may fill in “another” type of natural disaster. A survey also serves as a prompt for peer discussion. The very act of asking students whether they are interested in a topic might generate interest, especially if the student has regard for the teacher. It is worthwhile to give the survey again, post-unit, to reflect on any change.

Table 1. Interest Survey for a Natural Disasters Unit

	Low	Fairly Low	Neutral Mid-Level	Fairly High	☆ High ☆
Volcanoes					
<i>My interest level is:</i>					
<i>My knowledge level is:</i>					
Earthquakes					
<i>My interest level is:</i>					
<i>My knowledge level is:</i>					
Hurricanes					
<i>My interest level is:</i>					
<i>My knowledge level is:</i>					
Droughts					
<i>My interest level is:</i>					
<i>My knowledge level is:</i>					
Other: _____					
<i>My interest level is:</i>					
<i>My knowledge level is:</i>					

Disentangling Interest from Engagement

Interest is sometimes confused with other variables, including engagement, choice, enjoyment, or emotional arousal. Kamil et al. (2008) cite “Misunderstanding” as the first of four potential barriers to using motivators to increase adolescent literacy: “Some teachers think that motivational activities must entertain students and therefore create fun activities that are not necessarily focused on learning” (p. 29). Lessons can be enjoyable or entertaining, but perhaps not interesting, as physiologically manifested in puckered brow and focused gaze. For example, offering students a choice of task has been found to enhance affect (e.g., emotional response), but not necessarily cognition (Flowerday, Schraw, & Stevens, 2004). Choice, in and of itself, does not necessarily prompt interest beyond the moment of choosing. Similarly, while peer conversation can be motivational and has been found to generate and nourish domain-general interest, it does not replace the effects of individual thought, as found in an experiment measuring interest and learning among 100 history students in middle school (Del Favero, Boscolo, Vidotto, & Vicentini, 2007). Likewise, lessons may be enjoyable or pleasant but not necessarily interesting. Turner and Silvia (2006) found that unpleasant, repulsive paintings did not inhibit interest in college students, showing that a pleasant feeling does not, *per se*, prompt interest. If something sparks

If something sparks the psychological state of interest, teachers will see greater allocation of attention focused towards a single context—not diffused across the entire engaging environment.

the psychological state of interest, teachers will see greater allocation of attention focused towards a single context—not diffused across the entire engaging environment. Teachers may, under optimal conditions, see a student fully immersed in the task, experiencing the energized focus and “flow” discussed by Csikszentmihályi (1990). But this is all too rare.

Closing

Harkening back to Thorndike (1906), researchers agree that the development of sustainable interests should be a supra-ordinate goal of education. Further, in accord with Dewey (1913), virtually all modern theorists agree that interest is an important energizer—a critical motivational variable that serves as a tremendous resource for learning and is essential to the development of identity and the formation of life-sustaining pursuits (Hidi, 1990; Krapp, 2007). Our interests influence who we see, where we go, what we do – in short, how we live. The future looks brighter for the interested. Teachers can do much to foster sustainable individual interests and to spark a spontaneous situational interest. An interested reader or listener is more likely to comprehend the material—and is more likely to care.

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