

## Increasing Situational Interest in the Classroom

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*This paper explores three ways to increase situational interest in the classroom. Situational interest is defined as temporary interest that arises spontaneously due to environmental factors such as task instructions or an engaging text. We review the history of interest research and summarize recent empirical work. We describe three ways to increase interest based on offering meaningful choices to students, selecting well-organized texts that promote interest, and providing the background knowledge needed to fully understand a topic. We conclude with six specific suggestions for increasing situational interest in the classroom.*

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Interest increases learning. We believe that promoting interest in the classroom increases students' intrinsic motivation to learn and the number of learning strategies they use to do so (Pressley *et al.*, 1992; Sweet *et al.*, 1997). This paper examines a number of ways to increase interest in the classroom. Each of these strategies can be implemented by teachers at every grade level.

Researchers have identified two types of interest. *Situational interest* is spontaneous, transitory, and environmentally activated (Krapp *et al.*, 1992), whereas *personal interest* is less spontaneous, of enduring personal value, and activated internally (Schiefele, 1999). Situational interest often precedes and facilitates the development of personal interest (Krapp *et al.*, 1992). Situational interest appears to be especially important in catching students' attention, whereas personal interest may be more important in holding it

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(Hidi and Baird, 1986; Mitchell, 1993). Henceforth, we focus exclusively on situational interest because it is changeable and partially under the control of teachers.

Situational interest increases learning when a task or to-be-learned information is novel (Hidi, 1990), or when information is relevant to a task or learning goal (Schraw and Dennison, 1994; Shirey, 1992). Text variables such as coherence (Wade, 1992), identifying with characters (Anderson *et al.*, 1987), suspense (Jose and Brewer, 1984), and the concreteness and imageability of salient text segments (Sadoski *et al.*, 1993) also increase situational interest.

Previous research suggests that situational interest can be increased. This paper focuses on three general strategies for increasing interest in the classroom: (a) offering students meaningful choices, (b) carefully selecting well-organized texts, and (c) helping students to access appropriate background knowledge about the text or task. We describe recent research that examines the effects of choice on interest and learning, as well as teachers' beliefs about the uses of student choice as a means to increase interest. We also review research investigating the effects of coherence, relevance, vividness, and prior knowledge on situational interest and learning. Whenever possible, we try to incorporate insights from teachers and students about what increases interest in the classroom. Most of these observations are based on comments with teachers and students in classrooms while conducting research. Generally, we have found that teachers view interest as their responsibility, actively selecting interesting materials, and creating a classroom environment that increases students' interest. In contrast, students tend to adopt a more passive attitude about interest in which interest is something that happens to them, rather than something that occurs because of how they interact with classroom materials.

The remainder of this paper is divided into six sections. This section provides an overall plan for the paper. The second section provides a brief historical sketch of interest research. Third to fifth sections summarize research on the role of choice on interest, text organization variables such as coherence and relevance, and prior knowledge. The sixth section concludes with a number of suggestions for increasing situational interest in the classroom.

## **HISTORICAL OVERVIEW OF INTEREST RESEARCH**

Research on interest has waxed and waned over the past century. Dewey (1913) was the first to emphasize the crucial role of interest in learning.

Dewey believed that interest differed from effort, and that it was interest, rather than effort *per se*, that led to deeper learning. Dewey made two basic assumptions about interest. First, he believed that interest must be present in the classroom to satisfy students' intellectual and personal needs. Second, he believed that interest could be fostered by providing students with a variety of materials and educational opportunities that promoted challenge and autonomy. The teachers we have talked to about interest strongly agree with these claims.

Dewey's writings on interest were followed by a 50-year lull, in large part, because American Behaviorism, which typically was adverse to unobservable psychological constructs such as interest, simply chose to ignore the topic. However, with the advent of cognitive psychology in the 1960s, research and theorizing about interest steadily increased until it reached its highest level in the early and mid-1990s.

Kintsch (1980) was among the first to explicitly address the relationship between interest and learning. Kintsch distinguished between two types of situational interest he referred to as *emotional* and *cognitive* interest. Emotional interest occurs when text information evokes a strong affective response in the reader such as elation, disgust, or anger. Kintsch proposed that emotional interest was most likely to be evoked by major life themes such as death, sex, and interpersonal struggle. Cognitive interest, on the other hand, occurs when readers become engaged in otherwise ordinary text events because they are important to the structural development of the text.

The decade from 1980 to 1990 saw a substantial increase in the number of empirical studies of interest. These studies supported three general conclusions: (a) interest is related positively to attention and learning, (b) varies from person to person, and (c) is elicited by a variety of factors such as prior knowledge, unexpected text content, text structure, and reader goals. All of these studies reported that interesting information is learned better than less-interesting information. Teachers we have talked to agree with these findings, with many of them relying on interest to improve learning.

This research culminated in the publication of *The Role of Interest in Learning and Development* by Renninger *et al.* (1992). This volume provided an integrated theoretical framework based on the distinction between situational and personal interest and also provided a variety of interdisciplinary approaches for understanding interest.

Most research during the 1990s has focused on one of two general topics: (a) text or environmental factors that increase interest and (b) the role of seductive details in text learning (i.e., segments that are highly interesting, but unimportant to the overall text). Regarding the first topic, a variety

of studies indicate that multiple factors affect situational interest in important ways. These include prior knowledge (Alexander and Jetton, 1996), coherence and informational completeness (Schraw, in press; Schraw *et al.*, 1995; Wade, 1992), unexpectedness of information (Hidi, 1990), concreteness and vividness (Garner *et al.*, 1992), suspense (Jose and Brewer, 1984), engagement (Mitchell, 1993), imagery (Goetz and Sadoski, in press), and valuing (Wade *et al.*, 1999). Regarding seductive details, studies are equally split as to the potential effect they have on text comprehension. Wade *et al.* (1993) and Schraw (1998) reported facilitative effects for seductive details, whereas Garner *et al.* (1989, 1991), as well as Harp and Mayer (1997, 1998), reported a negative effect for seductive details. Although the reasons for these differences are unknown, they likely are due to differences in the type and complexity of text, as well as the goodness of fit between seductive details and surrounding text.

A number of authors have speculated as well about classroom factors that affect situational interest. Deci (1992) has suggested that classrooms that promote student autonomy and choice increase intrinsic motivation and situational interest. Supporting this claim, Sansone *et al.* (1992) found that students who choose to make boring tasks more complex report greater interest in those tasks. Schraw *et al.* (1998) reported that students given choices about what to read reported more situational interest.

A second set of factors pertain to aspects of the text or task with which students are engaged. Well-written texts are more interesting (Wade, 1992), and more interesting texts increase learning (Schraw, in press; Schraw *et al.*, 1995). Students' prior knowledge also affects interest. Kintsch (1980) proposed that moderate amounts of knowledge increase interest and learning, whereas high or low prior knowledge may decrease it. This claim has been supported by a number of empirical studies reviewed by Alexander and Jetton (1996) and Schraw and Lehman (in press).

Collectively, the research on student autonomy, as well as studies of how text factors and student prior knowledge affect interest, have influenced our own research, and our beliefs about the best ways to promote situational interest. We believe this research suggests multiple ways to promote interest; including changing the environment in which students read and study, providing better written texts that students find more interesting, and helping students access relevant background knowledge before reading.

We believe that teachers would agree with the earlier claims as well. Teachers we have talked to consistently emphasize student choices and text quality as decisive factors in classroom interest and engagement. Teachers believe that choices increase intrinsic motivation and interest. Most view selecting texts that are well organized and engaging as an important aspect of teacher planning.

## MEANINGFUL CLASSROOM CHOICES

A number of studies suggest that choice increases interest and task engagement (Parker and Lepper, 1992; Zuckerman *et al.*, 1978). Cordova and Lepper (1996) found that giving elementary-age children meaningful choices positively affected several measures of affective engagement, including perceived competence, a preference for greater task difficulty, overall liking, and a greater willingness to stay after class compared to students in a control group. Schraw *et al.* (1998) reported that giving college students choices about what they read increased situational interest in the material.

More recently, Flowerday (2000) conducted a set of experiments that isolated the effects of choice and personal interest on situational interest and several types of text comprehension. Personal interest ratings were made prior to reading the experimental text. Some students then were given a choice of what to read whereas others were assigned a text. Both the choice and personal interest variables had separate effects on situational interest and engagement. Both variables separately were related to situational interest. In addition, an interaction occurred between choice and situational interest, suggesting that students with low personal interest experienced a significantly greater increase in situational interest when given a choice in what they read. Choice and situational interest also affected several types of text appreciation such as generating personal and affective responses to the text after reading.

The positive effect of choice on interest can be understood most clearly within the context of self-determination theory (Deci, 1992). Self-determination theory suggests that people have an innate psychological need for competence, belonging, and autonomy (Deci *et al.*, 1991). Choice increases feelings of self-determination by satisfying the need for autonomy. In turn, increased self-determination leads to increased intrinsic motivation, interest, and engagement.

On a practical level, choice appears to increase interest for several reasons. One is that students tend to pick what they like or what they are curious about (Shirey, 1992). Satisfying one's curiosity increases intrinsic motivation and engagement (Kohn, 1993; Lowenstein, 1994). Second, choice allows students to select learning materials with which they are familiar. A number of studies indicate that prior knowledge increases engagement and understanding (Alexander and Jetton, 1996; Schraw and Lehman, *in press*). Third, having control of what and how one studies increases intrinsic motivation and interest (Deci *et al.*, 1991).

Our conversations with students bear out these claims. Students frequently speak of "ownership" when they are asked to make choices about

what and how to study. The majority of students report that choice increases their interest in the activity. In addition, students who are allowed to choose find it easier to select topics and activities they are familiar with, and therefore better able to become actively engaged in the activity.

The results of the empirical studies reported earlier suggest that choice consistently increases interest and engagement. To construct a better understanding of how choice affects interest in the classroom, Flowerday and Schraw (2000) conducted a phenomenological study of teachers' beliefs about instructional choice. A semi-structured interview format was used to identify what teachers believe are the best uses of choice within a classroom setting. Over 40 practicing K-12 teachers were interviewed separately for 1 hr each. Teachers indicated that increased student choice leads to increased interest, engagement, and learning. One important theme that pervaded teachers' comments was that choice gives students a greater sense of responsibility which increases their motivation to learn. Teachers also frequently mentioned that choice promotes student involvement, creativity, and improves problem solving (Kohn, 1993).

Of particular interest, teachers indicated that choice was perceived to be especially beneficial for students who had low interest and little motivation for the task at hand. Many teachers reported that choice increased students motivation and interest because it gave them a sense of control. Coupled with the empirical findings reported by Flowerday (2000), it appears that choice has an important compensatory effect on interest in which low-interest students become significantly more interested in a topic as a function of choosing it.

Teachers in the Flowerday and Schraw's study (Flowerday and Schraw, 2000) also reported a number of informal guidelines for using choice optimally in the classroom to increase interest and motivation. In terms of when to use choice, teachers suggested offering meaningful choices to students of all ages, especially those who demonstrate low interest otherwise. Regarding where to offer choice, teachers do so in a variety of settings, including tasks such as homework and student assessment, as well as academic and social activities. Regarding how to use choice, teachers offered the following suggestions: offer simple choices at first, help students practice making good choices, provide feedback about the choices students make, use team choices for younger or less-experienced students, and provide information that clarifies the choice. For example, one teacher stated that she lets her students choose from a menu of five or six stories that she knows are interesting and suitable to her students. Teachers also attempted to model choice-making behavior for students. For example, many teachers attempt to model their own thoughts about their criteria for making a good choice (e.g., a story is easy to read and covers a familiar topic). Criteria

usually included whether the student could accomplish the task successfully, whether the task was engaging, and whether the student could learn from the task.

### TEXT ORGANIZATION VARIABLES

Most classroom learning relies directly or indirectly on written text. As a consequence, much of the empirical research on interest has examined text factors that increase interest. Three general text factors have a substantial impact on situational interest, including coherence, relevance, and vividness. *Coherence* refers to the informational and organizational completeness of a text. In general, text that requires fewer inferences by readers is considered more coherent. *Relevance* refers to text segments that affect the reader's purposes or goals for reading. *Vividness* refers to text segments that stand out because they create suspense, surprise, or are otherwise distinctive.

Coherent texts increase interest because they are easier to understand than texts with low coherence. Coherent text is characterized by the smooth flow of ideas such that each new text segment can be integrated easily with preceding segments (O'Brien and Myers, 1999). Coherent connections enable readers to make inferences by connecting information in the text to prior knowledge. In addition, coherent connections reduce working memory load, enabling readers to attend to more global relationships in the text. Texts are most coherent under two conditions: when they minimize the number of referential inferences between segments and when they facilitate the generation of necessary inferences by presenting segments in close proximity to one another.

Research shows that high-coherence texts (i.e., those requiring fewer inferences) are rated as more interesting than low-coherence texts (Britton *et al.* 1989). In a review of the interest literature, Hidi (1990) reported that well-organized texts are rated as more interesting than less-organized texts. Wade *et al.* (1999), found that 39% of readers reported that low-coherence texts were less interesting than high-coherence texts. Similarly, Schallert and Reed (1997) found that considerate texts (i.e., those with greater intersegment coherence) were rated as more interesting and engaging.

Two separate studies by Schraw *et al.* (1995) and Schraw (in press) reported that coherence and informational completeness factors were related strongly to interest and learning. Using an expository text, Schraw *et al.* (1995) found that coherence and ease of comprehension explained over 50% of the variation in situational interest, and that situational interest

mediated the relationship between coherence and text learning. Schraw (in press) replicated these findings using a narrative text. Coherence and informational complexity explained over 50% of the variance in interest, whereas interest mediated the relationship between text factors and learning. Of special importance in both of these studies, coherence and informational complexity had no direct effect on learning, but had a substantial effect indirectly through situational interest. In addition, situational interest was significantly related to holistic interpretations of the text. The more situational interest a reader reported, the more likely it was that the reader generated integrated thematic inferences about the text.

Another variable that affects interest is the relevance of text information. Relevant text segments relate directly to the reader's goals and purposes. Relevance of information has been manipulated in a variety of ways. Schraw and Dennison (1994) increased relevance of segments by asking readers to take a particular perspective. Narvaez *et al.* (1999) did so by asking students to read for a specific purpose (read for entertainment and read to study). Means *et al.* (1997) increased relevance by adding comments that connected text segments to readers' lives. These manipulations increased interest and learning. Indeed, in the studies by Schraw and Dennison (1994), relevance significantly increased interest even when different groups read the same text segments.

A third variable that affects reader interest is the vividness of the text. Research suggests that a variety of text variables are related to vividness. Jose and Brewer (1984) found that suspense increased liking of text. Wade *et al.* (1993, 1999) found that vividness was positively related to judgments of text interest as well as longer reading times. Vivid segments were more memorable than less-vivid segments. Similarly, Schraw *et al.* (1995) found that the vividness of a text was related positively to interest and recall of text.

These findings indicate that text organization variables increase interest and that, in turn, increases deeper understanding. Savvy teachers pay attention to what their students read and make these books available to their students. These teachers understand that it is less important what a student reads, than how she or he reads it. Considerate texts create interest and facilitate learning. They do so by being informationally rich and well organized. In addition, teachers help students focus on relevant information by identifying purposes for reading or targeting specific types of information in the text. Teachers we have talked to usually adopt two related strategies to improve learning. One is to build an in-class library of books that most students enjoy reading. A second strategy is to let students select books they are interested in (Bruning and Schweiger, 1997).



## THE ROLE OF STUDENT KNOWLEDGE

Another variable that affects interest is background knowledge. Previous research reports a relationship between two different types of knowledge and situational interest. *Topic knowledge* refers to information a reader possesses about a specific topic, whereas *domain knowledge* refers to information a reader possesses about a general field of study such as mathematics or history (Alexander and Jetton, 1996). Alexander *et al.* (1994) found that domain knowledge was significantly related to interest and recall, whereas topic knowledge was not. In addition, interest and recall were significantly higher in the high-knowledge compared to the low-knowledge groups for both texts. Alexander *et al.* (1994) and Alexander and Murphy (1998) extended these findings by clustering individuals into mutually exclusive groups based on domain knowledge and performance. Results suggested that situational interest is related to knowledge in a one-to-one manner; that is, each increase in knowledge leads to a comparable increase in interest.

Debate continues, however, as to the form of the relationship between knowledge and interest. Tobias (1994) argued that knowledge and interest are related one-to-one regardless of how high or low one's knowledge is on a topic; however, Tobias's review was based largely on studies of personal rather than situational interest. In contrast, Kintsch (1980) hypothesized an inverted U-shaped relationship between knowledge and interest in which either high or low levels of knowledge have no effect on interest, whereas moderate levels of knowledge increase interest. Although researchers are still unsure how much prior knowledge is optimal, there is widespread agreement that moderate amounts of knowledge increase interest and text comprehension. Teachers we have talked to about interest stress the linkages among knowledge, interest, and learning. These teachers seem to rely on two simple rules of thumb. One is to let students choose books because they usually choose topics they are familiar with. Second, teachers provide necessary background knowledge when appropriate.

## SUGGESTIONS FOR INCREASING STUDENT INTEREST

The research described earlier suggests that situational interest increases student learning and is changeable. We believe that interest can be increased in a number of ways in the classroom, and that it is important to do so to increase engagement and learning. We offer six suggestions that focus on increasing students' autonomy (Point 1), engaging students with better texts (Points 2–4), and helping students to process information at a deeper level (Points 5 and 6).

1. *Offer meaningful choices to students.* Choice is hypothesized to promote a greater sense of self-determination because it satisfies students' need for autonomy (Deci *et al.*, 1991). Empirical studies of choice support this view. Teachers also suggest that choice increases students' interest in a text. Teachers interviewed by Flowerday and Schraw (2000) recommended offering a wide variety of choices to all students on a regular basis. Less-knowledgeable or less-self-regulated students should be helped to make choices. Teachers should provide feedback about the effectiveness of choices as well.
2. *Use well-organized texts.* Well-organized texts are those that are coherent and informationally complete. These two variables are strongly related to interest and learning in text (Schraw, in press). As texts become less user friendly, or as students become less knowledgeable about text content, we suggest that teachers make a greater effort to provide useful background knowledge about the text, given that knowledge and coherence appear to make separate contributions (McKeown *et al.*, 1992).
3. *Select texts that are vivid.* Texts are vivid because they contain rich imagery, suspense, provocative information that surprises the reader, and engaging themes. Research suggests that text vividness has a positive impact on interest and learning provided the vivid information is germane to the learning task. Texts that include irrelevant or highly seductive information may actually interfere with learning by diverting readers' attention from important text segments (Harp and Mayer, 1998).
4. *Use texts that students know about.* Prior knowledge is related positively to interest and deeper learning. Teachers should follow one of two strategies to promote interest. One is to use texts whose content is familiar, though not highly familiar, to the majority of students. Familiarity with text helps students generate thematic inferences within the text as well as between the text and prior knowledge. A second strategy is to provide prereading background information to help students better comprehend what they are asked to learn. This can be done directly by the teacher or small group discussions among students.
5. *Encourage students to be active learners.* Students who actively make meaning learn more information at a deeper level (Loxterman *et al.*, 1994). A number of researchers have suggested that interest increases active learning as well as the reverse (Dewey, 1913; Mitchell, 1993). One way that students become more active is by using specific learning strategies such as predicting and summarizing (Pressley *et al.*, 1992). Another way is by using general study strategies in which

students identify what they already know, want to know, and have learned (Ogle, 1986). Currently, it is unclear whether specific or general strategies are more effective at promoting interest and deeper learning; however, it is likely that both types of strategies do so.

6. *Provide relevance cues for students.* Understanding what is relevant to the learning task beforehand increases interest and learning (Narvaez *et al.*, 1999). Teachers should highlight relevant themes and information for students before they begin to read or study. This is especially important for low-interest students (Means *et al.*, 1997). We suggest several strategies for highlighting the relevance of information: (a) encourage students to set personal reading goals before reading, (b) help students understand what is most important or salient to the reading task, (c) ask students to focus on causal claims, and (d) ask student to explain the text to other students.

Highlighting the relevance of information or goals for learning may increase the perceived value of information. Voss and Schauble (1992) and Renninger (1992) suggested that individuals are more motivated to process information they value. Although valuing may be due, in part, to personal interest, it also appears to be affected by the culture of the school as well as teacher values. Teachers who highlight the relevance and value of information and skills for students may also increase interest.

## SUMMARY

Situational interest plays an important role in learning. We reviewed recent research on the role of choice, text organization, and prior knowledge on interest. All of these variables increase interest which, in turn, increases learning. Situational interest is malleable, meaning that teachers can do much in the classroom to increase interest. We provided six broad strategies for promoting situational interest. Research indicates that each of these strategies is related positively to interest and learning.

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