



## **Book Review: Daniel T. Willingham's *Why Don't Students Like School?***

Adena Young-Jones<sup>†</sup>

*Missouri State University*

Daniel T. Willingham's *Why Don't Students Like School?* (2009) sets out two goals in its introduction: to tell the reader (presumably a teacher) how his or her students' minds work and to clarify how to use this knowledge in teaching. As a cognitive psychologist, Willingham introduces readers to a new perspective to look at the relationship between teaching and learning. He is well established in the field; receiving his Ph.D. in 1990 from Harvard University and teaching at the University of Virginia since 1992. For the past twelve years, Willingham has altered his research, so his findings can be directly implemented in K-12 classrooms.

*Why Don't Students Like School?* is divided into nine chapters, each devoted to an area where cognitive psychology and education overlap. Every chapter is cleverly framed around a question pertinent to teachers working in the field, such as, “why don’t students like school?” Willingham answers the question at the beginning of each chapter and advises teachers on how to utilize the answers in their classrooms. The nine principles, making up nine chapters, are broad enough to cover any subject area, at any grade level, and, if applied correctly, can improve overall student performance.

Willingham begins the first chapter with a particularly intriguing principle; people are naturally curious, but not naturally good thinkers. He states the brain prefers to rely on memory rather than

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<sup>†</sup> Address for correspondence: Adena Young-Jones, Department of Psychology Missouri State University, 901 S. National Ave, Springfield, MO 65897. Email: [AYoung@MissouriState.edu](mailto:AYoung@MissouriState.edu).

thinking, as it is a slow, effortful, and uncertain process. Students must leave school with the ability to think deeply, yet this can only be accomplished if the student defies the inclination to use mental shortcuts. The teacher's responsibility, then, is to present the material while simultaneously encouraging meaningful contemplation. Students actually feel pleasure when they engage in thinking at their full potential. If students receive a problem presenting little mental work, they are bored and disengaged; if students receive a problem requiring too much mental work, they are discouraged. When the mental work required is at a moderate level, thinking is actively sought out and desired.

For students to become skilled thinkers, they must have an adequate amount of foundational knowledge. When a student has an ample amount of background knowledge he/she can start making inferences, a significant component of critical thinking. In addition, having an extensive knowledge base allows for a process called chunking to occur. Chunking is our brain's ability to combine information into meaningful groups, freeing up space in working memory for more complex thinking. Willingham believes the best way to increase background knowledge so chunking can occur is through extensive reading. He highly encourages teachers to push their students towards books of any kind.

Outside reading also solidifies student's understanding of classroom material. This is ultimately the goal of any lesson presented. When students are able to independently attach their own meaning to the lesson, effective thinking occurs naturally. The meaning a student attaches to a concept can also determine how long the concept will remain in the student's memory and be retrievable. An idea is initially stored in memory once it has been thought about carefully. It is often a teacher's greatest challenge to engage the student in an idea long enough for advanced thought to occur. Some teachers have tried tying their lessons to student interests in pop culture trivia. Instead, Willingham advises teachers to structure each lesson in the format of a story, complete with the elements of causality, conflict, complications, and character. By framing lessons in this familiar way, students focus on the meaning of the lesson just as they would focus on the meaning of a story.

Once students have retained the lessons, they are able to transfer the material for application outside the classroom. The human brain is wired to examine new concepts by relating them to information the individual already knows. Thus, having a solid foundation of background knowledge is essential for successful transfer. Teaching the material so it is plastered into students' brains can be challenging. Willingham reemphasizes how important it is for students to engage in higher thinking and attach their own meaning to the concepts presented. Only then is successful transfer ensured.

Another way teachers can aid their students, while they strive towards deeper understanding, is by giving them ample opportunities to practice. Similar to practicing a musical instrument or a competitive sport, practicing mental process will eventually improve skill. If enough practice occurs, little space in working memory will be used to think about simple, repetitive tasks, and additional room will be available for the student to pursue more advanced skills. Practice with multiple examples also makes the underlining theme of the lesson clearer, helping move the material into long-term memory faster. Willingham's tips for making practice sessions as effective as possible are to focus on the building blocks making up the problems, space out the sessions over time, and progress the practice material from simple to advanced.

Effective teaching has occurred once students master the material and are able to transfer it outside the classroom walls. Still, even after the best lessons, students will not be as capable as experts. It is unrealistic for teachers to expect their students to perform at the same level as scientists, mathematicians, and historians. These experts have abundant experiences making the mental processes related to their field automatic. Since students do not have the equivalent experience, it is unlikely they will develop valuable knowledge, a task designated for the experts. A more reasonable goal for students is comprehension of the material already in place and familiarization with the knowledge creation process.

It is a hard held myth that teachers should discriminate instruction in order to cater to the different learning styles of their students. Willingham assures his readers that no scientific evidence exists to

support the theory of categorically different learning types. Instead, Willingham explains differences between students occur in cognitive ability and cognitive styles (i.e., the student's preferred form of thinking). Willingham emphasizes children are more alike than different in terms of how they think and learn. Students do differ in cognitive abilities, but their diverse preferences in regard to styles is, at best, an opportunity for teachers to vary the curriculum.

Despite these differences in cognitive abilities, intelligence can be improved through persistent hard work. Willingham supports the notion of intelligence being malleable. Many people in the Western world believe intelligence is a fixed trait. Willingham argues genetics determine intelligence only insofar as they steer individuals into particular environments. Nevertheless, teachers can use the idea of intelligence being changeable to improve classroom motivation. Rather than patronizing students with false praise, teachers can show students their efforts can lead to improvement in class work and overall intelligence. Low achieving students are pessimistic when they hold onto the idea of intelligence being fixed. They will only be motivated when their efforts begin to pay off and the belief of fixed intelligence fails to hold true.

Teaching, itself, is a cognitive skill. In order to make the skill of teaching automatic, teachers must practice; the same way students must practice to make their thinking processes automatic. A teacher should actively work to improve their teaching skills, seek feedback from others, and undertake activities for the pure sake of development. Willingham offers both a long-term method for improving teaching based on feedback and a shorter, less daunting method based on self-reflection and casual dialogue with colleagues. The goals for each method are realistic and attainable for teachers.

Overall, Willingham's analysis of how the mind works has many strengths, perhaps the strongest aspect is the clear organization. Willingham begins each chapter in the same manner, with a critical question many teachers struggle to answer. Specifically, chapter four begins with the question "Why is it so hard for students to understand abstract ideas?". Willingham immediately addresses the answer to the question; however, in the explanation he singles out a

one-sentence thesis summarizing the impending chapter. In this specific chapter the statement is “We understand new things in the context of things we already know, and most of what we know is concrete.” In just one sentence Willingham implies students do not understand complex ideas unless they are presented in a meaningful context. Readers can anticipate the following chapter will reveal how a teacher can connect concepts to his or her students. Of course, this is exactly how Willingham proceeds.

When Willingham discusses a concept, he uses vivid and relevant examples to illustrate each principle. At one point, Willingham asserts students often focus too much on surface information rather than the underlying knowledge. To clarify, he illustrates two problems with the same solution: one problem was in the context of a medical tumor and the other in the context of an army invasion. Readers can easily see how surface content can overshadow the main message when the message is not emphasized. Allowing readers to arrive at the conclusion themselves enables Willingham’s argument to be much stronger than a verbal explanation.

Each chapter ends with a section entitled “Implications for the classroom.” Here, Willingham shows readers how to implement his message into the classroom. He accomplishes this by offering teachers ideas they can easily integrate into their lessons. For example, teachers can “provide examples and ask students to compare them” (p. 78). All Willingham’s advice is practical and effective for improving student learning.

Though the text overall is strong, a few minor weaknesses could distract readers. One drawback of the work is the use of several pop culture references. These examples will only be relevant to students reading the book in the current decade. For instance, Willingham asks readers to compare a teacher with the personality of Dick Cheney to one with the personality of Joey Tribbianai from the television show *Friends* (p. 51). This example will have more impact with readers today than in a time where *Friends* has been off the air for thirty years. It is assumed then, future editions of the book will include examples reflecting the current decade.

Readers will either appreciate or detest Willingham writing with a casual, conversational tone. This relaxed tone makes the concepts easier and more enjoyable to read, but at times can border on carelessness. For example, he occasionally uses poor wording choices (i.e., ‘stuff’ and ‘things’) to refer to his concepts. The laidback wording makes him seem less knowledgeable about the material, and this clearly is not the case. Additionally, at the end of each chapter Willingham sorts his references into “less technical” and “more technical.” Although, he is not using unreliable sources, simply using the heading “less technical” insinuates he might be. For this reason, it may have been better to combine the sources simply into one list.

By the time readers finish *Why Don't Students Like School?*, they should understand how the human mind works and be able to use this knowledge to improve upon their own teaching. In nine chapters Willingham describes not only how the student’s mind work but how the individual readers’ minds work. *Why Don't Students like School?* is an essential resource for education students and a concise refresher for experienced teachers. All can benefit from Willingham’s well-rounded work and solid advice.