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current education book summaries

File: Student Engagement

The Highly Engaged Classroom

By Robert J. Marzano and Debra J. Pickering With Tammy Heflebower
(Marzano Research Laboratory Powered by Solution Tree, 2011)

S.O.S. (A Summary of the Summary)

The main ideas of the book are:

~ Student engagement happens as a result of a teacher's careful planning and execution of research-based strategies.
~ This book provides the research behind improving student engagement and translates that research into practical strategies for the classroom.

Why I chose this book:
For years people have thought of student engagement as something primarily based on factors outside of school. However, Marzano and Pickering have combed the research and found an abundance of ways teachers can deliberately plan to increase the engagement in their classrooms. They present an overview of the research and then translate that research into over forty strategies that teachers can incorporate into their instruction.

I also like that the authors help to define "student engagement." As school leaders we often walk into a classroom and note that the students are "not engaged." However, we don't always have the language or the tools to help teachers understand why students are not engaged and what teachers can do to improve student engagement.

Marzano and Pickering define student engagement as a combination of both short-term attention and longer-term engagement. They explain that engagement results when students answer in the affirmative to the questions below:

"How do I feel?"
"Am I interested?"
"Is this important?"
"Can I do this?"

Each chapter in the book provides classroom strategies to address each of the four questions above.

The Scoop (In this summary you will learn…)

√ *An overview of the research on engagement and motivation – essential ingredients in effective schools*

√ *Strategies that engage students in the short-term by intriguing them and capturing their attention*

√ *Strategies that engage students in the long-term by connecting instructional goals with personal goals*

√ *Strategies that help students develop a sense of self-efficacy so they can answer 'Yes' to the question, 'Can I do this?'*

√ *Professional development suggestions for ways to use this book with teachers*

Introduction

Student engagement does not occur spontaneously – rather it is the result of a teacher putting specific, effective strategies into place that are proven to foster engagement. This book takes the research on student engagement and translates that research into practical suggestions for ways that teachers can enhance student engagement. The book centers on four overarching questions students ask themselves to determine their involvement in classroom activities. Each of these questions addresses one aspect of engagement:

I. How do I feel?
II. Am I interested?
III. Is this important?
IV. Can I do this?

The first two questions address the short-term aspects of engagement – a student's attention during the range of a few seconds to a few minutes. The second two deal with the long-term aspect of engagement – the extent to which classwork relates to a student's goals and helps the student develop self-efficacy. Each chapter in the book is devoted to the strategies teachers can to address each of the questions above.

Chapter 1: Research and Theory

Research shows that student engagement is an essential ingredient in effective schools. However, it is tricky to define engagement. In the literature it often involves elements of: *motivation, engagement, attention, interest, effort, enthusiasm, participation,* and *involvement.* The authors help by creating a consistent and clear definition of student engagement encompassing:

I. Emotions: "How do I feel?" -- discussed in Chapter 2
II. Interest: "Am I interested?" – discussed in Chapter 3
III. Perceived importance: "Is this important?" – discussed in Chapter 4
IV. Perceptions of efficacy: "Can I do this?" – discussed in Chapter 5

I. Emotions: "How do I feel?"

How students feel in the moment affects how likely they are to engage in the classroom activities. Below are three aspects of students' emotions that affect their engagement: (1) students' energy levels, (2) a teacher's positive demeanor, and (3) students' perceptions of acceptance.

(1) *Students' energy levels* – Psychologists often frame this as "arousal" and indicate that activities that heighten students' arousal in class help with energy and engagement. A lively pace is one way to keep the energy high. Another, as Eric Jensen and others have pointed out, is to include physical movement and encourage students to get regular exercise. A number of studies connect physical movement and enhanced engagement.

(2*) The teacher's positive demeanor* – When teachers display enthusiasm and intensity, studies have shown that this facilitates student achievement because it arouses students' attention. Jere Brophy states that teachers should be regularly enthusiastic and demonstrate intensity through timing, verbal and nonverbal cues, and gestures that alert students to material that is important. In addition, Peter Jonas summarizes the research that states there is a correlation between using humor and an increase in student engagement and achievement.

(3) *Students' perceptions of acceptance* – Studies show that when students are not accepted they are unlikely to engage in class activities. This includes both acceptance by the teacher, but more importantly, it involves peer relationships.

II. Interest: "Am I interested?"

Even if a student answers positively to the question, "How do I feel," he or she may not engage in an activity if it is perceived not to be interesting. In this section the focus is on what researchers call *situational interest* – a short-term psychological state as opposed to a longer-term interest in a topic, like hockey for instance. Teachers face a plethora of challenges in capturing students' attention because they are competing with thoughts about last night's basketball game or a girlfriend. Research points to four ways to maintain situational interest: (1) using game-like activities, (2) initiating friendly controversy, (3) using unusual information, and (4) using effective questioning strategies.

(1) *Using game-like activities* – A synthesis of a number of studies have found that when teachers use games and game-like activities, students have made a 13 to 18 percentile point gain in their achievement.

(2) *Initiating friendly controversy* – David Johnson and Roger Johnson found that classrooms that include friendly controversy promote higher-order thinking and hence can be used to enhance student achievement. In another study, students getting involved in controversial discussions led to more curiosity, more interest in the topic, and more study time on the topic.

(3) *Using unusual information* – In addition to controversy, unusual information sparks curiosity and serves to motivate.

(4) *Using effective questioning strategies* – When a student is answering a question, he or she is fully attentive. Research shows there is a 10 to 29 percentile point gain associated with effective questioning techniques.

III. Perceived importance: "Is this important?"

If a student believes something is important, he or she is more likely to remain engaged in the activity. Research shows that what makes something important to students has to do with whether the activity coincides with the student's: (1) self-system, (2) personal goals, and (3) perception that classroom activities are cognitively complex.

(1) *Self-system* – Some cognitive psychologists claim that individuals bring their own goals to any situation. Therefore, if an activity does not seem relevant to an individual's goals, that individual is less likely to engage. In schools, educators often erroneously make the assumption that academic goals overlap with students' personal goals.

(2) *Personal goals* – Research shows that students are more likely to be engaged when school goals are connected to their personal goals. Research also shows that using *choice* is a way to link students' own goals with classroom activities.

(3) *Cognitively complex tasks* – When complex tasks involve real-world applications, this helps students make a link between their own goals and academic goals. Students are more likely to see the relevance of learning if, rather than regurgitating facts, they are challenged to solve problems, make decisions, and conduct investigations. Students are more likely to be engaged in tasks they find to be cognitively engaging.

IV. Perceptions of efficacy: "Can I do this?"

If students answer "yes" to the previous question, but are unable to do the work, they are more likely to drop their engagement. A lot has been written about this topic in the field of cognitive psychology under the term *self-efficacy*. In a synthesis of 114 studies of self-efficacy and performance, research has shown there is an 82 percentile point gain for students. There are two ways students foster their self-efficacy: (1) possible selves and (2) self-theories.

(1) *Possible selves* – Some research shows that student self-efficacy comes from students having a clear sense of who they are and who they can become.

(2) *Self-theories* – Carol Dweck is responsible for one of the most powerful theories of self-efficacy. Her research points to the fact that students who believe that human competence can be learned are more likely to embrace challenging tasks. In another study in which students were taught that intelligence is malleable, students achieved statistically significant gains in both reading and math.

While engagement is a challenging and complex term to define, the authors provide a consistent and workable definition. They define *attention* as positive responses to the first questions, ("How do I feel" and "Am I interested?") and *engagement* as positive responses to the third and fourth questions ("Is this important?" and "Can I do this?") Based on this, a teacher should be constantly asking: Do I have my students' attention? Are they engaged? If the answer to the first question is no, the response is to better pique the students' interests. If the answer to the second question is no, the teacher should look for ways to help students recognize the importance of the material and raise the students' sense of self-efficacy.

Chapter 2: How Do I Feel?

While the answer to this question is often affected by factors the teacher cannot control – the home environment, adequate nutrition, sleep, etc. – there *are* important factors that the teacher can control to help students answer in the affirmative. In class, the student's energy level, the teacher's demeanor, and the student's perception of acceptance all contribute to whether the student is engaged or not. If a student does not feel accepted or the teacher has a negative demeanor, chances are that the student will not be fully engaged. This chapter introduces five strategies teachers can employ to purposefully and methodically maintain a positive, lively, and accepting atmosphere in class: (1) using effective pacing, (2) incorporating physical movement, (3) demonstrating intensity and enthusiasm, (4) using humor, and (5) building positive teacher-student and peer relationships.

(1) *Using effective pacing* – If pacing is too fast, students get lost. If it's too slow, students' minds start to wander or worse, they get disruptive. Finding the right balance is important. Much of pacing has to do with classroom management and it would be useful to get more specifics from a resource (such as Marzano's book on classroom management) to help with this. There are several times when achieving that balance is particularly important to maintaining the right pace:

a. **Handling administrative tasks** – Pacing can be significantly slowed down if teachers don't have clear and well-practiced routines in place for basic administrative tasks such as handing in assignments, distributing materials, and getting students into groups.

b. **Making transitions** – Another crucial area that can impede pacing is how teachers handle transitions. Students need to know exactly when activities are starting, how long they last, and when they will end. For example, projecting directions from a computer onto a screen along with a quiet timer alerting students when one minute is left, can help smooth a transition.

c. **Assigning seatwork** – Regardless of the instructional activity, some students inevitably finish before others. To avoid having early finishers distract others, teachers should have set activities prepared for those students who finish quickly.

d. **Presenting new content** – If the pace when presenting new material is too fast or too slow, students may become frustrated. In order to provide time for students to process new information and to monitor their understanding, teachers should try a "chunk and chew" approach. This involves presenting a small chunk of information and then giving students time, in small groups, to answer questions or summarize what they have learned. If attention is flagging, teachers can shorten the "chunk" so students actively process more frequently.

(2) *Incorporating physical movement* – Classroom activities that incorporate physical movement have a positive impact on students' energy levels. On page 25 there is a list of four books that serve as resources for ways to increase physical movement in the classroom. Below are four ways to integrate physical movement into class activities:

a. **Movement to lift energy** – Sometimes incorporating physical activities that have nothing to do with content helps students with their energy levels. Teachers should consider providing regular *stretch breaks* so students can stand and stretch for a few minutes.

b. **Movement to deepen or further understanding** – Movement that is connected to content has the dual goal of furthering understanding while also increasing energy levels. Teachers can ask students to move to different corners of the room to answer different questions (*corners activities*) or have students *vote with their feet* by moving to different parts of the room depending on what they believe. Students also can stand to create physical representations of class concepts such as radius or circumference. One other suggestion is to have students use *drama* to re-enact historical events or stories from literature.

c. **Movement to galvanize an entire class or school** – Physical exercise has a positive effect on students' ability to engage, so schools should consider finding ways to open their gyms for student use, build climbing walls, or develop some other additional ways for students to work out regularly.

Discussion Questions From the Book, page 24

• What are some of the limitations of these pacing approaches?
• Which aspects of pacing are you good at and which do you need to improve?

(3) *Demonstrating intensity and enthusiasm* – When a teacher indirectly communicates, "This is fun!" or "This is exciting!" it is contagious for students. Below are some ways to communicate this message.

a. **Personal stories** – When teachers can illustrate the material they are teaching with anecdotes from their own lives it suggests that they are excited about the content.

b. **Verbal and nonverbal signs** – Teachers can signal enthusiasm by speaking with a loud voice, smiling, and using hand gestures.

c. **Zest for teaching** – Teachers often forget the initial excitement they once had when they started teaching. It can help for teachers to find a way to regularly remind themselves of this passion. One teacher watches *Stand and Deliver* every year.

(4) *Using humor* – Incorporating humor into the classroom helps students feel better about themselves and the content. Below are some suggestions for ways to do this:

a. **Self-directed humor** – It is best *not* to use students as the subject of humor. Instead, teachers should use themselves. For example, in discussing a previous decade, a teacher might bring in photos of herself with big hair.

b. **Funny headlines or quotes** – Students or teachers can bring in funny headlines or quotes connected to the content. For example, a science teacher could borrow a headline from the *Tonight Show*, such as: "Total Lunar Eclipse Will Be Broadcast on Norwoods Public Radio."

c. **Movie clips and media entertainment** – While it might be too time consuming to show an entire movie, a movie clip to illustrate a point in class can energize students.

d. **Class symbols –** Another way to incorporate humor is to create a class symbol – such as a fictitious character – to serve as the object of humor. This prevents the teacher or the students from being the subject of jokes.

(5) *Building positive teacher-student and peer relationships* – In order to feel good in class, it is vital that students feel the teacher likes and respects them. Note that this is not about what the teacher *thinks* about a student, but rather, it is about how the teacher speaks to and behaves with the student. There are several ways teachers can forge good relationships with students:

a. **Ensure fair and equitable treatment of all students** – If students feel rejected by their peers, they are less likely to engage in their learning. The most basic way a teacher can ensure this is to immediately stop hurtful behavior, make the classroom feel safe, and help students in need. There are several strategies and books on bullying on pages 36-37. One suggestion is to create a list of student rights and enforce it throughout the year.

b. **Show interest in and affection toward students** – Regardless of how a teacher feels toward certain students, showing simple courtesies -- such as greeting students at the door and making eye contact – go a long way. Teachers also can show affection with appropriate physical contact and attending to student needs, such as when a student is out due to a death in the family.

c. **Identify and use positive information about students** – When teachers seek out positive information about students, and use that information, this communicates a powerful message. Teachers can inventory students' interests at the beginning of the year or speak with parents or other teachers and coaches to learn more about their students' strengths.

Chapter 3: Am I Interested?

Students will engage in classroom activities not only based on how they feel, but also based on their interest. This chapter focuses on four strategies that help to enhance student interest so they will answer the question "Am I interested?" in the affirmative: (1) using games and inconsequential competition, (2) initiating friendly controversy, (3) presenting unusual information, and (4) questioning to increase response rates.

(1) *Using games and inconsequential competition* – These activities help to both spur and maintain situational interest, but they should always have an academic focus. Competition that is inconsequential means that it is friendly and students participate in a way that everyone gets to lose and win at some point. Below are two categories of these games.

a. **Vocabulary games** – For a resource, Carleton and Marzano's 2010 book *Vocabulary Games for the Classroom* includes 13 vocabulary games. It contains games such as *Which One Doesn't Belong?* In this game students are given four different terms, three of which share a commonality, and the students need to figure out which one doesn't belong and write an explanation for why. In another vocabulary game, *What Is the Question?* students receive an answer, like in *Jeopardy!* and must supply a correct question.

b. **Turning questions into games** – Rather than simply asking a question to a single student, the teacher can put students into teams and have each team confer on the answer to a question, and then present it to the class.

Discussion Questions From the Book, page 65

• Why do academic games stimulate attention?

• What would be appropriate teacher behavior if many students did poorly on the questions in an academic game?

• What are some ways you have used games in the past?

(2) *Initiating friendly controversy* – Like the games above, controversy helps to stimulate and maintain student interest. When students present opposing views this encourages them to dive deeper into the content, sometimes even outside of class. Teachers need to create ground rules to ensure that discussions do not get out of hand and remain productive. Below are some ways to structure controversy.

a. **Class vote** – In this simple strategy, students vote on a particular topic, such as whether to switch from an income tax to a flat tax. To make it productive, students must explore both positions before and after the vote and be open to changing their minds.

b. **Debate model** – Teachers also can structure a formal debate to stimulate productive controversy. One common debate format is the Lincoln-Douglas debate in which there is a set structure with time for presenting arguments, cross-examining, and making rebuttals.

c. **Town hall meeting** – Unlike a debate, the purpose of a town hall meeting is for students to hear about an issue from a variety of perspectives. For example, there might be a mock town hall meeting on the topic of eminent domain. The teacher would provide a packet of background material and then create different roles for students to play during the meeting: a government agent who is enforcing eminent domain, a citizen forced to sell his property, and a citizen who supports eminent domain because she benefits from it.

d. **Legal model** -- In this approach, students closely analyze U.S. court cases. See pages 62-63 for more details.

e. **Perspective analysis –** This is a structured approach for students to explore their thinking behind opposing opinions. It may involve answering a series of questions such as, "What do I believe about this?" "Why do I believe this?" etc.

(3) *Presenting unusual information* – Humans are naturally curious, so introducing unusual information to students piques their interest. An example might be showing students that a Möbius strip actually has only one side or in studying the human body, teaching students why knuckles pop. The book includes over two pages of sources to find unusual information (pp.65-67) and includes Internet sources for unusual information such as Livescience.com, the Kids Know It website (social studies and science facts), and Mudd Math Fun Facts. There is also a list of books with intriguing information such as *Legends, Lies, and Cherished Myths of American History* and *Dr. Joe & What You Didn't Know: 177 Fascinating Questions & Answers About the Chemistry of Everyday Life*. Below are three ways teachers can use this unusual information.

a. **Introduce a lesson** – By introducing an unusual fact, information, or story at the beginning of a lesson, teachers can use it as a rationale for why they are about to present the upcoming lesson.

b. **Allow students to research and collect interesting facts** – Students can be involved in putting together a class-generated list of unusual or little-known information about a topic the class is studying. The teacher can create a database or in-class wiki as a way of capturing the learned information.

c. **Invite guest speakers** – Guest speakers provide a firsthand and intriguing opportunity for students to learn unusual information about the topic at hand. Note that the guest speaker can join the class via video conference and need not appear in person.

Discussion Questions From the Book, page 70

• What is the underlying dynamic behind using unusual information to capture students' attention?

• How might the use of unusual information facilitate class participation and cooperation?

• How have you utilized unusual information in the past? What topics do you teach where you could use unusual info?

(4) *Questioning to increase response rates* – While having students answer questions is a great way to capture their attention, the problem is that this often means that the rest of the class does *not* pay attention while one student answers. The solution lies in engaging *more than one* student at a time in answering questions. Below are several strategies for ways to increase response rates.

a. **Call on students randomly** – When students know the teacher only calls on students raising hands, they relax and stop engaging because they know they will not be called on unless they raise their hands. If students know the teacher regularly calls on students randomly, they will be more likely to engage because they could be called on at any point.

b. **Paired response** – To increase the number of students responding to any given question, a teacher can use paired response. After a question, pairs are given time to confer so that *all* students are engaged. Then one pair is randomly called on to give a response.

c. **Wait time** – By providing students with *wait time* – time to think after asking a question – teachers encourage *all* students to think, not just those who immediately know the answer. This increases the number of students who can answer the question.

d. **Response chaining** – To involve more students, after one student responds to a question, the teacher can ask another student to respond to the first student's response. For example, the teacher could ask a second student if the answer was correct and to explain why it was correct or what the correct answer would be. For more open-ended questions, the second student could state whether she agrees with the first student's answer and explain why.

e. **Choral response** – When students are struggling with specific information, the teacher can use choral response – when all students answer a question in unison – to help imprint the information. For example, one teacher noticed students were struggling so she asked the entire class to recite the principle, "The angle of incidence is equal to the angle of reflection."

f. **Simultaneous individual response** – With choral response the teacher cannot ascertain if every student responded and responded correctly. However, simultaneous individual response provides a way to engage all students and to track individual responses. One way to do this is through hand signals – a teacher asks a question with four possible responses and students raise 1, 2, 3, or 4 fingers to signal which answer they believe to be correct. Or each student has an individual whiteboard. The teacher might say, "Everyone write the Spanish word for *elephant*," and everyone responds simultaneously. This not only engages the entire class, but the teacher can see which students are struggling with the material. Finally, teachers can use electronic devices and project student answers on a screen. A graph on the screen might show that 50% of the class answered 'D,' 20% answered 'C,' 20% answered 'B,' and 10% answered 'A.' This provides anonymity for the students although the teacher knows who clicked which answer.

Chapter 4: Is This Important?

The previous two chapters focused on the more short-term goal of grabbing students' attention. The next two chapters deal with the deeper phenomenon of *engagement*. Engagement goes beyond a specific activity or a single class and gets at whether the material relates to the students' lives. The goal of this chapter is to incorporate strategies that will help students answer affirmatively to, "Is this important?" Students believe something is important if it relates to their self-system -- the basic goals that form the foundation of our motivation. Students are always working to ensure their basic goals are being met – those that meet their needs for safety, food, and shelter. Above these subsistence goals, a student might have the goal of becoming a better golfer or learning more about famous artists. Then above this level students have goals about their life ambitions, such as wanting to be a good mother or a doctor in an impoverished area. Classroom activities that help students connect to these higher goals will better help them believe that, yes, this is important. Several types of activities can help students make the type of real-world connections so they see class activities as important: (1) connecting to students' lives, (2) connecting to students' life ambitions, and (3) encouraging application of knowledge.

(1) *Connecting to students' lives* – There are several ways to connect activities to students' lives and heighten their engagement.

a. **Comparison tasks** – While activities that ask students to compare two entities are often engaging on their own, if teachers can find ways to relate these to topics students are interested in, then students will become particularly engaged. Most comparison tasks involve comparing and contrasting characteristics of several items. In this case, instead of a science teacher having students compare two animals, he might have students choose what to compare an alligator to. Or in studying Lincoln and his tremendous ability to persevere, a teacher might have students choose a contemporary role model who also perseveres to compare to Lincoln.

b. **Analogical reasoning tasks** – In the same way a teacher might structure a comparison task to allow students to incorporate ideas from their own lives, teachers can do the same with analogies. Rather than the traditional format (page 90) (carpenter: hammer :: painter: _____), teachers can provide more open-ended analogies. In the example, heart: circulatory system :: _____ : _____, one student might write "motor:car" while another writes, "mother:family."

(2) *Connecting to students' life ambitions* – Life ambitions are the highest level of self-system goals, but it can be difficult for teachers to incorporate these types of goals into the classroom because they don't always fit into traditional subjects such as math, science, social studies, and language arts. To address this, teachers can assign a *personal project* in addition to having students complete their regular coursework. Without taking too much time from instruction, teachers can devote a portion of class time every so often for students to work on a personal goal. For example, students might start by identifying a personal goal ("I would love to become a fighter pilot in the navy.") Then the teacher would have students research both heroes and role models who have accomplished this goal. The next phase, after synthesizing this research, would be to have students list the skills and resources they need to accomplish the goal. Then to begin to achieve the goal, the students would list the ways they will need to change and create a plan for achieving this. Finally, students would choose a few small steps to initiate right now.

(3) *Encouraging application of knowledge* – Teachers can help students see their work as important by providing them with opportunities to apply what they are learning to the real world. There are several ways to do this.

a. **Design cognitively challenging tasks** – As the research shows, students perceive cognitively challenging tasks as important and engaging. When possible, teachers should design activities that engage students in decision making, problem solving, experimental inquiry, and investigation. A teacher of any age group can find a way to incorporate one of these four types of activities in a classroom. At the high school level a teacher might design an *investigation* or an *experimental inquiry* focused on the challenges of the third world while an elementary or middle school teacher might have students engaged in *problem solving* or *decision making* around the concern the school district has with students eating too much junk food.

b. **Provide choice** – By providing choice, teachers help students perceive classroom activities as important. There are a number of ways teachers can do this. They can allow students to choose from among a variety of teacher-designed tasks, or, if appropriate, have students design their own tasks. Teachers also can have students focus on the same topic but allow them to demonstrate their understanding in a variety of formats (a written report, a debate, a videotaped report, etc.) Another powerful way to incorporate choice is to have students design their own personal learning goals within a unit of instruction. Note that this would be *in addition* to the teacher-designed goals for the unit.

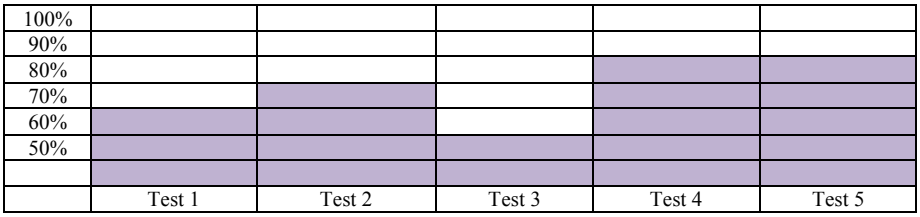
c. **Present real-world applications** – Another way to help students see the connection between classwork and the real world is to design tasks that have a real-world impact or connection. This can be facilitated more easily if the whole school or district emphasizes this. Some schools have included service-learning projects while others have students prepare for and take a field trip.

Chapter 5: Can I Do This?

Self-efficacy may be the most important factor affecting student engagement. Even if students answer affirmatively to the questions, "How do I feel?" "Am I interested?" and "Is this important?" if students feel the work is too hard, ("No, I can't do this!") then engagement will be lost. This chapter focuses on four strategies to enhance students' sense of self-efficacy: (1) tracking and studying progress, (2) using effective verbal feedback, (3) providing examples of self-efficacy, and (4) teaching self-efficacy.

(1) *Tracking and studying progress* – If students know how well they are performing by tracking their progress, and then connect that achievement to their behavior, this will heighten their sense of self-efficacy. A thorough approach to tracking progress would include the following three parts:

a. **Tracking academic progress over time** – Students can use a chart, graph, or other visual model to chart their progress over time. If they are tracking their progress for a very specific goal – such as spelling or solving a specific type of math problem – they can use a graph like the one below:



For more complex skills – like writing or problem solving – teachers can use a rubric and have students chart their progress on the rubric. For example, on a scale of 0 to 4, a student might get a 1.5 on the first assignment, then move up to a 2.0 on the next, etc. By looking at their progress over time on a graph, students will be able to see their learning and progress over time.

b. **Setting personal academic goals** – Once students see how they are performing, they can create goals for improvement and devise a plan for *how* they intend to accomplish their goals. They can use a form like the one excerpted below and teachers can provide regular time (perhaps daily) for students to record their goals and reflect on their perceptions of progress:

Personal Progress Chart

Name: Avery DeMarco

My Goal: A score of 4.0 on the heritable traits presentation

What Will I Do to Accomplish My Goal? I will work on my presentation of how heritable and nonheritable traits affect each other for a at least 10 minutes each night.

How Well Am I Doing? I'm not keeping up with my plan to work 10 minutes each night. I have to stop watching TV so much.

c. **Examining effort and preparation** – In addition to tracking academic progress, students can track their effort and preparation as a means of helping them understand the connection between the two. Students can use a scale like the one below and graph the results on the *same* chart as their progress so they can see the link between effort and accomplishment.

Scale for Effort and Preparation	
Score 4.0	To be sure I accomplish my goal, I'm trying harder and preparing more than I think is necessary.
Score 3.0	I'm trying hard enough and preparing well enough to accomplish my goal.
Score 2.0	I'm trying hard but not preparing as well as I could.
Score 1.0	I'm not trying very hard or preparing very well.
Score 0.0	I'm not really trying or preparing at all.

Discussion Questions From the Book, page 123

• How does tracking student progress relate to the growth theory of competence?
• What does asking students to develop a plan for their goal and tracking effort and preparation add to the utility of having students track their progress?

(2) *Using effective verbal feedback* – Teachers have an important influence over the way students think about their self-efficacy. Whether a student thinks her intelligence is fixed or can grow is reinforced by the type of verbal feedback teachers provide. This section outlines the type of feedback to avoid and the type of feedback to emphasize.

a. **Types of verbal feedback to avoid –** Avoid feedback that suggests students have permanent traits – whether those are good or bad. Even something like, "You solved all of those math problems very quickly, see how smart you are!" can suggest to students that either they have it (intelligence) or they don't, rather than they can work toward it.

b. **Types of verbal feedback to use** --- Instead, teachers should provide students with feedback that references *how well* (or how poorly) they completed a task as well as the effort and preparation they put into the task. Furthermore, it helps to be specific about the task, "It's clear that you worked really hard on this. You have a well-organized essay here, and it is very well developed – especially the part about…" Verbal feedback on a task done poorly should also include what the student did well and what specifically still needs to be improved. It is important that this type of feedback makes students want to try harder and prepare better, *not* make them embarrassed. The underlying message should be that if students work hard they can accomplish challenging goals.

(3) *Providing examples of self-efficacy* – To show students the power of a strong sense of self-efficacy, teachers can share inspiring stories and quotations to provide examples of self-efficacy.

a. **Stories** – Literature and history provide a wealth of examples of people who have succeeded due to their sense of self-efficacy. There are a number of books and resources listed on p.128 of the book such as *Kids With Courage: True Stories About Young People Making a Difference* and *Dare to Dream! 25 Extraordinary Lives* as well as movies such as *Mr. Holland's Opus* and *Apollo 13.* These resources serve as a starting point for having discussions about efficacy.

b. **Quotations** – Just like with stories about efficacy, students can discuss the significance of different quotations that relate to it. Teachers can post these on the board daily. The book has over four pages of inspiring quotations starting on page 130.

Discussion Questions From the Book, page 135

• What is the relationship between stories and developing a sense of efficacy?
• How might quotations be used in ways that stories cannot be easily used?
• What are stories from your own life or lives of people close to you that might inspire efficacy in students?

(4) *Teaching self-efficacy* – The final way to help students develop a sense of self-efficacy is to teach directly about it. Teachers can share information with students about the elasticity of the brain and emphasize that hard work can improve their achievement. Below are a few strategies to do this.

a. **Explain growth and fixed theories** – Teachers should share the research with students that shows that our beliefs about our abilities greatly affect how we approach challenges in our lives. Also, our abilities are not fixed – with effort, we can improve.

b. **Have students identify their personal theories** – Teachers can use a questionnaire or other tool to help students determine the ways in which they hold growth or fixed beliefs about their own abilities (see page 137).

c. **Keep the conversation alive** – Once teachers have introduced the theories of growth and fixed intelligence and the concept of self-efficacy, they should regularly discuss these topics with students throughout the year, perhaps having students write answers to the following questions in a journal or log (page 138):

• How is your understanding of your self-theory affecting you in school?
• What insights have you gained based on your understanding of the growth theory and the fixed theory?

Chapter 6: Planning for High Engagement

So far, the authors have introduced strategies to enhance student engagement and organized them based on the four questions introduced above ("How do I feel?" "Am I interested?" "Is this important?" and "Can I do this?") While this makes sense based on the research, it is does not necessarily facilitate the planning of instruction. Instead, this chapter divides the strategies into the following three categories along with guiding questions for each section to help with planning:

(1) Daily strategies – strategies that can be used daily
(2) Opportunistic strategies – strategies to be used from time to time
(3) Extended strategies – strategies that extend beyond the purview of the classroom

PLANNING FOR HIGH ENGAGEMENT
(1) Daily strategies – Below are strategies teachers should use daily along with questions to help them guide their daily planning.
a. Using effective pacing (page 148) • Do I have appropriate routines in place for the administrative tasks I will be using today? • Am I aware of the transitions between activities I will use today, and do I have a plan for how to address those transitions? • Do I have activities planned for students who finish their seatwork early? • What will I do to remain aware of moving too slowly or too quickly when presenting new content?
b. Demonstrating intensity and enthusiasm (page 148) • Which aspects of the content addressed today am I particularly enthusiastic about? • How will I demonstrate my enthusiasm (personal stories, verbal and nonverbal signals, reviving the zest for teaching)?
c. Building positive teacher-student and peer relationships (page 148) • What can I do to ensure fair and equitable treatment for all (ensure no one is teased or bullied, establish fair and equitable expectations)? • How can I show interest in and affection for students today? (courtesies, physical contact and gestures, attending to needs)? • How can I gather positive information about students to use in building relationships with them?
d. Using effective verbal feedback (page 148) • During what activities today could I provide feedback to students? • What are some phrases I should avoid and what are some phrases I should use when providing feedback?
(2) Opportunistic strategies – Below are strategies that do not fit into *every* lesson but can be incorporated into instruction when appropriate.
a. Incorporating physical movement (page 150) • How can I introduce physical movement today and which techniques will best fit into today's lesson (movement to lift energy, movement that furthers understanding of the content, movement for the whole class or school)?
b. Using humor (page 150) • Could I incorporate humor into any of the addressed content? • What strategies will I use (self-directed humor, funny headlines/quotes, movie clips)?
c. Using games and inconsequential competition (page 151) • Is there content that has been addressed that can be effectively reviewed using games? • What types of games best fit this content?
d. Initiating friendly controversy (page 151) • Could I incorporate friendly controversy into any of the addressed content? • What strategy will I use to stimulate friendly controversy (class vote, debates, town hall meetings)?
e. Presenting unusual information (page 151) • Could I use unusual information? • How will I use unusual information (to introduce a lesson, to allow students to research, by inviting guest speakers)?
f. Questioning to increase response rates (page 151) • What content should I ask questions about? • What techniques should I use to increase the effectiveness of my questions (call on students randomly, paired response, wait time, response chaining, choral response, simultaneous individual response)?
g. Connecting to students' lives (page 152) • Could I incorporate comparisons with students' lives in any of the addressed content? • What type of comparisons will I use?
h. Connecting to students' life ambitions (page 152) • Are there specific units or courses in which I can use personal projects? • How long will the projects last? • How much time will I spend each week on the projects?
i. Encouraging application of knowledge (page 152) • Does the content being addressed lend itself to authentic applications to real-world issues? • Are there ways to use problem solving, decision making, hypotheses, or investigations using the content? • Is it possible to give students a choice (of task, format, goals, behavior)?
j. Tracking and studying progress (page 153) • Can students track their progress over time on any of the addressed content? • How will facilitate students' personal goal-setting and development of strategies to attain these goals?
k. Providing examples of self-efficacy (page 153) • Are there specific units or courses that can provide examples of self-efficacy? • How can I use stories or quotations in these situations?
l. Teaching self-efficacy (page 154) • Can I teach efficacy through any content that has been covered or will be covered? • What sources will I use to teach about efficacy and how will I maintain an active conversation about it? • How will I teach about the growth theory and the fixed theory?
(3) Extended strategies – These strategies fall outside regular class planning and usually involve whole-school activities or real-world applications. While individual teachers cannot implement a schoolwide activity, below are some planning questions as a start (page 155): • Does a schoolwide program need to be developed to enhance the engagement of our students? • What are some things I can do in my classroom to try out aspects of the program?

Overall, with careful attention to planning, teachers should be able to address all four aspects of student engagement by planning with the goal of addressing the questions: "How do I feel?" "Am I interested?" "Is this important?" and "Can I do this?"

PROFESSIONAL DEVELOPMENT SUGGESTIONS FROM THE BOOK

There are a number of professional development suggestions woven throughout the book, including:

1) Each chapter contains questions and ends with a summary that can be used to frame a discussion of the chapter.

2) Each chapter also has a set of exercises. Each exercise is reprinted as a reproducible for easy copying. Reproducible exercises also can be downloaded at marzanoresearch.com/classroomstrategies. Teachers can complete these exercises individually and compare answers with a team. Answers to the exercises are in the back of the book and on the website.

3) In addition to including questions and exercises, each chapter has a tool teachers can use to evaluate how well they implement the strategies from the chapter. Teachers can self assess, and then after learning a few new strategies from the book, they can self assess again to see how they have improved. These self-assessments appear at the end of each chapter and on the website above as well. Below is a sample of one of the self-assessments:

Self-Assessment Scale					
	0 – Not Using I never use this strategy.	1 – Beginning I sometimes use this strategy, but I don't think I use it correctly.	2 – Developing I use this strategy, but I do so mechanically.	3 – Applying I use this strategy and monitor how well it works.	4 – Innovating I know this strategy well enough that I have created my own version of it.
Using Effective Pacing					
Administrative tasks					
Transitions					
Seatwork					
Presentation of new content					
Incorporating Physical Movement					
Movement to lift energy					
Movement that furthers understanding of content					
Movement for the whole class or school					
Demonstrating Intensity and Enthusiasm					
Personal stories					
Verbal and nonverbal signals					
Zest for teaching					
Using Humor					
Self-directed humor					
Funny headlines or quotes					
Movie clips and media					
Building Positive Teacher-Student and Peer Relationships					
Ensure fair and equitable treatment					
Show interest in and affection for students					
Identify and use positive information about students					

4) In the last chapter, Planning for High Engagement, there is a list of questions teachers can use as they plan daily lessons and units as a way to ensure that they purposefully plan for high engagement. A committee of teachers and/or administrators can take this list and customize it as a tool for your school to emphasize the aspects of engagement that would work best for your school. It would be a powerful tool if all teachers then commit to using that set of questions in their planning.

