Engaged or Not Engaged...That is the Question

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Dr. Almarode, one of our ATEC 2013 presenters, has worked with all age groups in education, and with thousands of teachers. His dynamic workshop offered participants ready-to-use strategies and the brain rules that make them work. He has authored several publications, as well as a book on student engagement.

What do the numbers say?

As classroom teachers, we strive to have every student engaged from start to finish, achieve academic success above and beyond expectations, and walk across the stage as lifelong learners. However, research suggests that these are not the experiences reported by our students. For example, Indiana University in Bloomington, Indiana engaged in a national study of student engagement. Focusing on high school students, the Center for Evaluation and Education Policy found that 66 percent of students reported being bored on a daily basis. In addition, 49 percent of those students reported being bored in every class. Other sobering findings include:

- Only two percent of students surveyed reported that they have never been bored in school.
- Only 41% of students report that they go to school because they want to learn.
- Only 23% of students indicated that they attended school (rather than dropout) because of their teachers.
- Only 33% of students reported that they like school (Yazzie-Mintz, 2010).

So what do we do with these numbers? One option is to throw up our hands and walk-away. This, of course, is not in our nature as educators. The second, and most ideal option is to tackle the challenge of student engagement. How can we design and set-up learning environments that engage student minds, promote academic success, and create lifelong learners? First we have to understand what it means to engage students in the classroom. Then we have to identify the most successful tools or strategies for fostering and nurturing this engagement. What follows is the start of addressing both of those previously mentioned items: what does it mean to engage students in the classroom and what strategies do this best?

What are the different types of engagement?

Engagement looks different in each student, classroom, and school. For example, administrators and teachers alike can identify students that follow every direction, do exactly what is asked of them, and never "step out of line" between the hours of 8:00 a.m. and 3:00 p.m. There are some students that love coming to school because they appear to enjoy every second of the day. They love learning just for the sake of learning new things. There are some students whose "wheels are always spinning". These students are often described as deep thinkers, always pondering ideas and content. Finally, there are students that exude none of these characteristics and cause us the most concern as educators. These four scenarios represent four different types of engagement or ways that students engage in our schools and classrooms. The four different types of engagement are: (1) behavioral engagement, (2) emotional engagement, (3) cognitive engagement, or, the least popular of the four from an educators perspective, disengagement (Almarode & Miller, 2013; Appleton, Christenson, & Furlong, 2008; Fredricks, Blumenfeld, & Paris, 2004; Reschly, Huebner, Appleton, & Antaramian, 2008; Skinner, Kinderman, & Furrer, 2009). The examples described above exemplify characteristics of each

of these four types of engagement. Let's take a look at each type of engagement individually and then tie it all together into the necessary balance for optimal student engagement.

Behavioral engagement refers to what the students are doing. These are observable behaviors in the classroom. For example, students that get out their books, turn to the requested page, and complete the assignment as asked are behaviorally engaged. On the other hand, students that do not have their books out on their desk, are not on the same page, and have yet to even start the assignment are not behaviorally engaged. Exemplified by classroom procedures and behavioral cues, behavioral engagement is often the focus of parents, teachers, and administrators because it is easily observed and measured. However, that is not the whole story behind student engagement. Consider the student that follows every direction, does exactly what was asked of him or her, and "never steps out of line". What if this student, in spite of being behaviorally engaged, finds no relevance or meaning in the content or assignments or does not feel as if he or she is included in the classroom community? This student is lacking emotional engagement.

Emotional engagement refers to how the student feels about school, the classroom, his or her teacher, classmates, content, and/or specific assignments. Although this could be interpreted as emotional attachment, it differs from emotional attachment in that there should be no expectation that each student should love British Literature, Right Triangle Trigonometry, Cellular Respiration, or the French Revolution. Instead, as a classroom teacher, our responsibility is to structure our classrooms and present content in a way that fosters relevancy and meaning while the students are in our classroom. Content is not represented as discrete bits of random facts that must be memorized to pass a test. Students that are emotionally engaged in the learning make comments like "wow, that was interesting", "I did not know that about...", or "that is not as boring as I thought." This type

of engagement is exemplified by student-teacher relationships, classroom cohesiveness, realistic expectations, inconsequential competition, authentic experiences, and novelty. Similar to behavioral engagement, emotional engagement is not the whole story behind student engagement either. Consider the classroom where the teacher and students all get along, play games (inconsequential competition), and do novel demonstrations in science class that always result in a "wow effect" but the students have no idea why or what the point of these emotional engaging activities were about? These students are lacking cognitive engagement.

We only remember what we think about (Willingham, 2009). Cognitive engagement refers to what students are thinking about while in the classroom. Put differently, when students are behaviorally engaged in the classroom or a specific learning activity, what they are thinking about largely determines what they will remember from the specific class or learning activity. Cognitive engagement is the direction and magnitude of the students' cognitive resources. A student that is behaviorally engaged in completing a laboratory exercise in science could be thinking about what the scientific concepts addressed in the laboratory exercise or simply going through the motions, thinking about something totally irrelevant to the scientific concepts. The former represents cognitive engagement while the latter represents a lack of cognitive engagement and will not result in student learning. Cognitive engagement is exemplified by specific strategies that explicitly require students to think about ideas, topics, concepts, and content. Examples of these strategies include inquiry-based activities, Venn diagrams, writing prompts, think-pair-shares, and developing and explaining concept maps. However, as pointed out in the two previous paragraphs, cognitive engagement, alone, is not the whole story behind student engagement. If behavioral, emotional, and cognitive engagement, by themselves, do not tell the whole story behind student engagement, what does? The answer lies

not in a single type of engagement, but a balance of all three. As mentioned above, classrooms and teachers that focus only on behavioral engagement do so at the expense of emotional and cognitive engagement. Classrooms and teachers that focus only on emotional engagement may be fun and exciting, but lack in behavioral engagement and thinking (i.e., cognitive engagement). And, classrooms and teachers that are designed to be information dumps will likely evolve into mutiny (i.e., lack of behavioral engagement) and misery (i.e., zero emotional engagement). Any one of these combinations results in the fourth type of engagement: disengagement.

Optimal student engagement is achieved only by designing classroom environments that foster behavioral, emotional, and cognitive engagement while at the same time recognizing that on any given day more attention may be needed in one area over another area. Different days of the week (e.g., Mondays and Fridays), topics within the curriculum (e.g., simple versus complex, concrete versus abstract), and scenarios throughout the school year (e.g., homecoming, prom, holidays) often require teachers to adjust how much attention is needed to engage students behaviorally, emotionally, and cognitively. However, recent research has helped classroom teachers identify specific, evidence-based strategies that foster and nurture student engagement by engaging them behaviorally, emotionally, and cognitively (Almarode & Miller, 2013; Almarode, 2013; Hattie, 2012; Hattie, 2009; Marzano, Pickering, & Heflebower, 2010; Marzano, Pickering, & Pollock, 2001). Teachers that incorporate the following components into their classrooms have the greatest chance of striking the right balance for student engagement: building, activating and using learner background knowledge; provide novel and rich experiences with classroom content; create opportunities to make meaning of their learning; show learners the big picture, monitor the flow of input; and provide opportunities for feedback and error correction (Almarode & Miller, 2013; Almarode, 2013). To

get started on striking a balance of the three types of engagement, let's take a look at four specific strategies that can be put into action tomorrow, or the next time you see your students.

What are strategies that foster balanced engagement?

Student Choice. When students feel empowered or if they feel that they have control over their own learning, they are more likely to go along with the plan for the day. Therefore, one way to increase the behavioral, emotional, and cognitive engagement in our classrooms is to provide opportunities for student choice. Two examples of how students can be offered choices are choice boards and/or learning menus (Gregory & Chapman, 2008; Gregory & Hammerman, 2008).

Choice boards take the form of tic-tac-toe boards or other matrices, which display multiple products or activities from which students can choose. The products or activities could be completed in-class or out-of-class and should vary in difficulty and complexity. As an example, let's say you wanted to create a choice board for a unit on electricity and you want to use a tic-tac-toe board as the template. Students would be asked to select three items from a total of nine options so that when they completed those three items they would have tic-tac-toe. After each option is completed, students would have to get an approval signature from you, the teacher, to ensure students were appropriately completing the tasks. If you are concerned about students selecting easier items, make sure each possible tic-tac-toe winning combination contained challenging products or activities.

Learning menus are a variation of choice boards that mimic the use of a menu in a restaurant. To develop a learning menu, the teacher must identify several activities that are warm-ups or introductory activities to serve as appetizers, a couple of activities that are the anchor activities for a specific unit or chunk of content and are the main courses, several supporting activities that act

as side dishes, and a handful of bonus activities to be desserts. Just as in a restaurant, students select their appetizer, main dish, two side dishes, and one dessert. Just as when we were kids, you must eat your appetizer first, main dishes and sides can be eaten together, and only after you finish everything else can you eat the dessert. Much like the choice boards, the difficulty and complexity should increase with the main dish. The dessert should be so enticing that students want to get to it.

There are many strategies for offering student choices, choice boards and learning menus are just two examples.

Opportunities for Clarity and Meaning Making. As students cognitively wrestle with the ideas, topics, concepts, and content presented in class, they are naturally seeking meaning and clarity (Jensen, 2005). When students are unable to find meaning or clarify their learning they begin to cognitively disengage. Once students have cognitively disengaged, they most likely begin to behaviorally and emotionally disengage. Translation: problems and disruptions in the classroom. Thus, it is important the teachers build in opportunities for clarity and meaning making into each day.

Opportunities for clarity and meaning making are strategies that allow students to process, reflect, and review ideas, topics, concepts, and content. These strategies should require students to make their thinking visible, bring out their own perspectives on the content (Ritchhart, Church, & Morrison, 2011). Examples of these strategies are:
- Have students teach content to another classmate (peer teaching).
- Model the concept (e.g., the water cycle dance, parts of a neuron, hand gestures for the order of operations).
- Connect the idea, topics, concepts, and content to personal events or stories (e.g., grocery shopping, changing the oil in your car)
- Facilitate a debate on the topic, asking students to build support for both sides of an argument, decision, or situation.

- Align ideas, topics, concepts, and content with history (e.g., electric circuits and the invention of the light bulb, buoyancy and the first submarine).
- Create a visual representation of the content (e.g., cartoon, illustrations, images).
- Have students develop analogies and metaphors for content (e.g., how is a cell like a factory).
- Encourage students to create concepts maps making sure that students explain their "connectors".

Working these strategies into students' daily routines and classroom experiences will provide multiple opportunities for students to clarify their learning, make meaning of the content, all while maintaining behavioral, emotional, and cognitive engagement.

Press and Release. Too much, too fast, it won't last (Jensen, 2005). Put differently, our brains can focus on complex learning for only so long and can handle a limited quantity of input. Specifically, the student brain can handle 10 – 12 minutes of input or 3 – 4 chunks of information before it needs a break (Baddeley, 1999; Cowan, 2001; Jensen, 2005). When input (i.e., ideas, topics, concepts, and content) comes at students too fast or in one dose, it exceeds the working memory capacity of the student brain. When this capacity is exceeded, students either stop taking in additional input or overwrite the earlier input (Jensen, 2005). A student flooded by academic input leads to a cognitively exhausted brain that first checks-out mentally, followed by behavioral and emotional disengagement. The solution to this classroom challenge is a strategy referred to as press and release (Allen, 2001).

Press and release describes the general pattern of the school day that monitors the quantity and flow of input, careful not to exceed the capacity of a student's working memory. This pattern consists of 10 – 12 minutes (maximum) of press and the moments of release. For example, a mathematics teacher might present two examples of solving quadratic equations (10 minutes of press). After

the second example, he or she might have the students turn to their neighbors and review the process for solving quadratic equations (2 minutes of release). Once students have finished explaining the process to neighbors, the teacher might then have them work independently on one or two examples (10 minutes of press) and then check their work with neighbors (2 minutes of release). This pattern buffers the working memory system of kindergarten kids, middle school students, and high school seniors alike.

To avoid flooding students with too much input, too fast, it is important that teachers structure instructional time around presses and releases. This helps prevent disengagement simply because the quantity and flow of information was too much to handle.

Elaborate Rehearsal. A final strategy for balanced engagement is elaborate rehearsal. Elaborate rehearsal is important because of a little known, rarely recognized feature of the human memory system. We are designed to forget (Wolfe, 2010). Well, we are designed to forget things that are not a matter of life and death. When you hear something the first time, if it is not repeated within 30 seconds of hearing it, you will forget it. If you do repeat it within 30 seconds, you must repeat it again within one to two hours or you will forget it (Medina, 2009). Therefore, when students are exposed to content for the very first time, they must engage in strategies that encourage them to repeat or rehearse the content. There are two ways to rehearse content: rote rehearsal and elaborate rehearsal (Wolfe, 2010). Rote rehearsal is the repeating of the same task or skill over and over again (Wolfe, 2010). Although important for skill building, it is elaborate rehearsal that is necessary for deep understanding of ideas, topics, concepts, and content. Elaborate rehearsal involves:

- Rich descriptions of ideas, topics, concepts, and content rather than basic definitions from the back of the book.

- Take concepts and represent them linguistically and non-linguistically.
- Involves the gradual building of content through multiple exposures, rather than one and done.
- Encourages students to break down ideas, topics, concepts, and content into parts.
- Requires students to discuss content.
- Requires students to play with ideas, topics, concepts, and content.
- Focuses on building and using essential academic vocabulary.
- Varies depending on the level of Bloom's articulated in the standards or curriculum.

Elaborate rehearsal provides opportunities for students to repeat and thus remember content. This, in turn, improves their retention, recall, and ultimately, academic success. This academic success will certainly keep them engaged behaviorally, emotionally, and cognitively.

Engaged or not engaged?

That may be the question, but the answer is an easy one. Engaged! Engaged students are more successful students. Growing successful students is our business. Over the past several decades, a growing body of research has highlighted specific strategies that foster and nurture balanced engagement in our schools and classrooms. What is most exciting about this research and the highlight strategies is that the strategies are things that we can put to use sooner rather than later. These strategies, when integrated into the already growing body of evidence-based practices, provide a behaviorally, emotionally, and cognitively engaging environment.

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