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# The Writing Engagement Scale: A Formative Assessment Tool

Seth A. Parsons, Samantha T. Ives, R. Stacy Fields, Bonnie Barksdale, Jonathan Marine, Paul Rogers

This article shares a valid and reliable tool to assess student writing engagement. The Writing Engagement Scale—the WES—informs writing instruction to enhance writing performance.

s. Kim has always been able to tell which of her fourth graders were engaged in their writing and which students were not. Yet beyond these basic distinctions, she knew little about students' writing engagement. This year, though, she has been using the Writing Engagement Scale (WES) to obtain a more robust picture of her students' writing engagement. Based upon her students' results on the WES, Ms. Kim put more emphasis on building a writing community—a place where students interact with each other to support each other's writing. The results showed her that most of her students were not engaging socially in the writing process. They were treating writing as a solitary activity.

Therefore, Ms. Kim taught strategies for interacting with peers to enhance each other's writing. She conducted explicit lessons on collaboratively brainstorming ideas, organizing ideas, revising for clarity, and more. For example, last month she demonstrated small-group writing shares, where students read their in-progress writing aloud to a group of peers who are listening to provide feedback on a specific aspect of the writing. In modeling this strategy, Ms. Kim asked students to pay attention to the descriptive language in her writing; that is, was she painting a picture in their minds with her language? Was she bringing her story to life with her word choice? The WES provided her with detailed information about students' writing engagement that informed her writing instruction.

Student engagement is an important consideration for teachers because it is associated with enhanced student performance and success (Lei et al., 2018). Engagement has received increasing attention, including in reading research (Guthrie & Wigfield, 2000; Lee et al., 2021; Parsons et al., 2015). This research has demonstrated that reading engagement is associated with reading amount and reading comprehension (Ivey & Johnston, 2013; Wigfield et al., 2008). However, there has been far less attention given to writing engagement.

While one would assume that students who are more engaged in their writing would write more and write better, few studies have explored these assumptions and there are few tools available to ascertain student writing engagement (Ives et al., 2022). Given the benefits of writing engagement and the dearth of tools for assessing it, we sought to further explore this area. We began by designing the Writing Engagement Scale (the WES). In this article, we describe the importance of writing engagement, we discuss the importance of assessing students' writing engagement, we present a valid and reliable tool for assessing students' writing engagement, and we offer practical advice for using the WES in classroom practice.

# What is Writing Engagement, and Why is it Important?

Motivation and engagement are related but distinct ideas. Motivation is the impetus that compels one to act (Ryan & Deci, 2020). It is the driving desire that leads to action.

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Engagement is active, intentional, and thoughtful participation in an activity or process (Reschly & Christenson, 2012). A key difference between motivation and engagement in writing is that one can be motivated to write without actually writing. But to be engaged in writing, one must write.

Engagement is conceptualized as a multidimensional construct that includes affective, behavioral, cognitive, and

social components (Alexander, 2018; Fredricks et al., 2004; Parsons et al., 2018). Affective engagement includes interested and enthusiastic participation. Students who are affectively engaged in writing are eager to write and excited about the topic or the task. Behavioral engagement refers to effort and focus. Behavioral writing engagement includes exerting energy and effort to write and staying focused on writing (as opposed to being off task).

Cognitive engagement involves strategic thinking and acting. In *On Writing Well*, Zinsser (1976) explained that "writing is thinking on paper" (p. vii). To write well, students need to be metacognitive; that is, they need to

think about and evaluate their writing (Harris et al., 2009). When students are cognitively engaged in writing, they think deeply and act strategically (e.g., planning before writing, consulting resources to gain information). Social engagement refers to interacting with others to complete a task. Writing, like learning generally, is a social act (Prior, 2006). Writing communicates a message for a reader; thus, writing is inherently social. And when writers share ideas and share their writing with others, the product is better and the process is more enjoyable. See Table 1 for more information regarding the dimensions of engagement.

When students are engaged in their academic work, their participation, interest, performance, and achievement increase. Research is clear that student engagement leads to positive outcomes (Tao et al., 2022; Wang et al., 2016). Even better, when students are engaged in their writing, they have fulfilling writing experiences. That is, engagement is beneficial for the students' writing proficiency and their enjoyment in writing.

Although many consider writing to be an independent process, writing teachers know that learning to write does not occur in a vacuum. Classroom environments, social interactions, and writing assignments all influence student engagement (Parsons et al., 2018; Reschly & Christenson, 2022; Skinner, 2016). Luckily, there are ways to foster students' engagement. Teachers' consideration

of student writing engagement helps to create meaningful learning experiences for students. However, because some facets of engagement occur internally (i.e., affective and cognitive engagement), it is difficult to know the degree to which students are experiencing engagement. For these reasons, it is important to assess student writing engagement.

#### PAUSE AND PONDER

- In what ways do your students show engagement in their writing?
- Do you know the writing engagement level of your students across genres?
- What are the benefits of using specific knowledge about student engagement for your writing instruction?
- How can you meaningfully enhance your students' writing engagement?
- How does your writing curriculum emphasize engagement?

# The Importance of Assessing Writing Engagement

Assessment is a vital component of classroom instruction. Assessing students' knowledge and performance gives us important information about what they already know and still need to learn, which allows us to best meet students' diverse needs. For writing, assessments traditionally focus on writing quality. For example, writing rubrics abound, focusing on components such as conventions, diction, organization, and so on. One common writing assessment

approach is the 6 + 1 Traits, which emphasizes ideas, sentence fluency, organization, word choice, voice, and conventions as hallmarks of good writing (Culham, 2003). We fully support using such rubrics for assessing student writing performance because they provide insight into students' strengths and needs in writing. Therefore, teachers can differentiate instruction to teach the various components of writing based upon student needs.

Here, however, we argue that it would behoove teachers to *also* assess students' writing engagement. As we presented in the previous section, engagement is closely associated with participation and performance. If we understand our students' engagement in particular pieces of writing, we can provide targeted instruction to enhance students' writing experience and performance. In addition, when students are engaged in their writing, they enjoy it, they are enthusiastic about it, they are more strategic in their writing processes, and they interact more with peers. In short, when students are engaged, it is more fun for students, they write more, they spend more time on revision, they seek help more frequently, and their writing is stronger.

# **The Writing Engagement Scale**

The WES is informed by research and theory on engagement, generally, and literacy engagement, specifically. The

Engagement Dimension Definitions and Writing Examples

Dimension	Definition	Writing example	Writing nonexample
Affective engagement	Interested and enthusiastic participation	Students are into what they are writing. They are excited to get started	Boredom. Students groan when the teacher says it is writing time. They ask when writing will end
Behavioral engagement	Effort and focus	Actively writing or completing a task related to writing. On task	Off task. Students are talking with peers about topics unrelated to writing. Avoidance behaviors
Cognitive engagement	Strategic thinking and acting	Students create a plan for their writing (e.g., outlining, webbing). Students reread their writing, looking to enhance clarity	Students complete one draft without any planning and say they are finished without reviewing or seeking feedback
Social engagement	Interacting with others to complete a task	Students talk with peers about their ideas. Students trade pieces of writing for feedback. Students read their piece of writing aloud to a group of friends	Students do not share ideas with anyone. Students work alone on writing and do not share it with anyone

WES was designed with an explicit focus on classroom use as a formative assessment tool for teachers and as a self-assessment tool for students. Our aim was to create a scale that produced valid and reliable information about students' writing engagement that was also practical for teachers and comprehensible for upper elementary students (grades 3–5). With information about students' affective, behavioral, cognitive, and social writing engagement, teachers can differentiate and optimize their writing instruction to meet students' instructional needs and heighten students' engagement in writing.

With this theoretical base and pragmatic goal, we designed, tested, and refined the WES through multiple iterations. We first created potential survey items that were aligned with the subcomponents of engagement: affective, behavioral, cognitive, and social engagement. Because feasibility for teachers was central to our effort, we kept the survey short, creating two items for each subcomponent for a total of eight items. Five literacy scholars, two teachers, and two students provided feedback on the items. Scholars and teachers commented on items' appropriateness for the construct of engagement and the subcomponent addressed. Students evaluated the clarity of items, articulating what they thought each was "getting at." We revised the items based upon this feedback (Rogers et al., 2022).

We piloted the scale with 179 students in grades 2–5 in Texas. The results suggested we needed more items for each subcomponent of engagement to reveal multiple factors. Therefore, we added two additional items for each subcomponent to provide a more robust measurement of writing engagement. These additions led to a 16-item survey, which we administered to 327 third through fifth-grade students in Georgia and Texas. This analysis demonstrated that the WES validly and reliably measured students' affective, behavioral, cognitive, and social engagement (Rogers et al., 2022).

To ascertain the usefulness of the survey information for teachers, we sent teacher participants the collective survey data for their class and asked them to comment on the data: Are the results useful? Which items are most helpful? What insights do you gain from these results? How might you adapt your writing instruction based upon these results? How might we revise the WES to be more helpful for you? Teacher responses were overwhelmingly positive. One teacher shared, "I am very excited about the results of this survey." Another explained, "The overall results are useful to see how the students feel about their own, personal writings."

Teachers found the results helpful and described specific ways in which they could adapt their instruction based upon the WES results. For example, one teacher expressed, "The overall class scores will help me to think about and adjust my instruction." In addition, they noted that they gained insights and perspectives that they had

not previously considered, thereby advancing the potential impact of the WES to enhance future writing instruction. A teacher shared, "It showed me how important it truly is that students feel connected to the subject matter we are teaching and see themselves in the assignments they are presented with so that it's not just another daunting task." See Rogers et al. (2022) for full information regarding initial piloting processes and outcomes.

To further refine the WES, we modified the scale slightly based upon previous results. We revised four items due to their poor performance in our previous analysis (Parsons et al., 2023) and discussed the wording of all items. Two additional items were revised to better align with the construct of engagement. With these modifications, we administered the scale in California to 254 students in grades 2–8. Although we designed the WES for upper elementary students, we are continuing to investigate its applicability to a wider range of grade levels.

Confirmatory factor analysis revealed valid and reliable results for the revised WES. Our final model (which included the four factors: affective, behavioral, cognitive, and social engagement) fit the data well,  $x^2_{SR}$  (96) = 134.14,  $CFI_{SB} = 0.96$ , RMSEA<sub>SB</sub> = 0.04 [0.02, 0.06], SRMR = 0.05. We found evidence of convergent validity through the strength and significance of factor loadings; all standardized loadings were significant and ranged from 0.66 to 0.75 for affective engagement, 0.57-0.66 for behavioral engagement, 0.55-0.61 for cognitive engagement, and 0.48-0.74 for social engagement. We also found evidence of discriminant validity in that factor intercorrelations ranged from 0.47 to 0.73, which shows the factors are not too strongly related and should not be combined into one factor. Based on the results of our confirmatory factor analysis, we created composite variables of the four types of writing engagement by calculating the average of each factor's items. Student descriptive information and subscale reliabilities were as follows: affective engagement (M = 3.85, SD = 0.82,  $\alpha$  = 0.80), behavioral engagement (M = 4.14, SD = 0.62,  $\alpha$  = 0.74), cognitive engagement (M = 3.89, SD = 0.68,  $\alpha$  = 0.70), and social engagement (M = 3.63, SD = 0.80,  $\alpha$  = 0.72).

In this article, we present the final form of the WES (see Appendix A). After extensive pilot testing, the survey we share here has demonstrated strong psychometric properties and informative usefulness for upper elementary teachers' writing instruction.

# **Using the WES**

As we noted at the beginning of this article, we designed the WES explicitly for classroom use. At 16 questions, it is unintrusive, taking about 10 min for students to complete. Therefore, we recommend administering the WES at least once a quarter with a piece of writing students complete that goes through the writing process. We do not recommend using the WES for one-off writing assignments, such as journal responses, warm-ups, or exit tickets. The WES is beneficial for students and teachers. It compels students to reflect on and enhance their writing. It helps provide teachers with insights that are constructive for planning and adjusting instruction.

We have administered the WES using Google Forms. To access the WES Google Form for your personal use, you can use this link: https://tinyurl.com/CopyWESForm. When you click it (or copy and paste it, or type in the URL), it will ask you if you want to make a copy. If you click "Make a copy," then the Form created will be private to you. That is, no one else will see your students' responses unless you share that copy of the Form, and you will not see anyone else's results. Therefore, the WES is yours for personal classroom use. See Appendix B. for detailed instructions for administering the WES and reviewing data by subscales using Google Forms and Google Sheets. If you would prefer to hand calculate student scores, refer to Appendix C.

Online administration provides many affordances, including ease of administration. Students can also upload their writing when they fill out the WES. Google Forms automatically compiles student responses to be analyzed. Thus, teachers can quickly see individual responses as well as the collective data for the class. We recommend that teachers average the ratings for each factor (affective engagement, behavioral engagement, cognitive engagement, and social engagement). The scale ranges from 1 (strongly disagree) to 5 (strongly agree). Therefore, we interpret averages as follows:

- 1-2.5 = Disengaged
- 2.5-3.5 = Neutral
- 3.5-5 = Engaged

For teachers, the WES illuminates students' own perceptions of their engagement with writing at both the class and individual level. In doing so, it provides information that can be leveraged by teachers to optimize instruction for individual students and the whole class. For example, if students are consistently rating their cognitive engagement lower (e.g., "When writing this piece, I reread to see if I could make it better"), then the teacher would know that there is an opportunity for explicit instruction on rereading strategies. However, if only a few students rated the same item poorly, then the teacher could decide to provide individualized or small-group instruction. Similarly, if students were consistently ranking their social engagement lowly

("When writing this piece, I talked with my peers about my writing"), then teachers would quickly know that providing more class time for peer conferencing would help drive students' engagement with writing through providing students additional opportunities to engage with others about what they have written.

WES results are not for critiquing teacher practice. Formative assessment data such as what the WES provides can both validate and challenge elements of curriculum and instruction. Our results show that many teachers reported the information provided by the WES affirmed that how they were teaching was working. For example, one teacher shared that the WES results "confirmed what we as a third-grade teaching team expected and made [us] happy to see that they liked the assignment." In this way, the WES can serve as an informal check-in with students that helps teachers to know what is working in their classrooms.

With that said, our sense is that teachers particularly value moments of insight into student feedback that they did not anticipate—when WES results surprised them either positively or negatively. Our WES results surfaced differences between teacher perceptions of their own practice and what students shared, particularly related to opportunities to receive feedback and engage in conversations about their writing. For example, one teacher expressed, "Overall, [the WES] gave me insight on this writing piece, seeing a lot of students felt like they didn't get the chance to talk to their peers about their writing." Another shared, "It is very interesting for me to see which students did not want their writings to be shared with other people." These are two representative examples of teachers interpreting WES results and thinking about adjusting their future instruction. Additionally, during one of our WES data collections, we asked 74 teachers to identify the item that they saw as "most useful." See Table 2 for what teachers reported as the most useful WES items.

Most of all, formative assessment tools like the WES help teachers to understand whether or not students were interested in and enjoyed writing. In doing so, the WES provides a powerful tool for in situ formative assessment that teachers can use to affirm, adjust, and optimize their instruction-especially over time. Teachers can utilize the WES across an assignment, unit, or semester to track how student engagement fluctuates across different types of curricula and instruction, and in doing so test out for themselves what works to drive engagement. That teachers valued being surprised demonstrates how important it is to account for students' own perceptions of their engagement with writing tasks. Because learners are the ultimate arbiters of successful learning in the classroom, their opinion matters. In this way, the WES quickly and easily surfaces data, otherwise unseen, that can aid teachers in their efforts to differentiate and optimize instruction.

We can see a situation in which the WES results led to instructional changes in the following example. Mrs. Solis noticed that scores for social engagement were not increasing from the previous checkpoint of the WES in her fourth-grade class, so she took action to increase social engagement. She created paired writing partners based on common interests from a student interest inventory. These partnerships had specific roles for each time that they met. Roles included reading for constructive feedback, oral brainstorming, giving a compliment, and suggesting of a specific goal for the next meeting based off a list provided by the teacher of previous lessons. After implementing these writing partners for a quarter, when the next WES checkpoint was administered, Mrs. Solis noticed increases in not only social engagement but also affective engagement.

Table 2
Teacher Responses for the "Most Useful WES Item" Survey Question

Dimension	Frequency	Percent	Item
Cognitive	18/74	24%	When working on this writing assignment, I reread to see if I could make it better
Affective	12/74	16%	When writing this writing assignment, I was interested in what I was writing
Social	9/74	12%	When working on this writing assignment, I talked with other students about my writing
Behavioral	7/74	9%	I stayed focused when working on this assignment
Behavioral	6/74	8%	I worked as hard as I could on this writing assignment

It is also possible to use the WES to inform your collaborative practices, as shown in the following scenario. Mr. Diaz and Ms. Bower are the only fifth-grade teachers in their school, and they collaborate by sharing resources and supporting each other's instructional practices. At their school, writing instruction is incorporated in all content areas and both teachers see the value in administering the WES to all their students. Together, Mr. Diaz and Ms. Bower review the WES results each quarter to reflect upon each domain of engagement across their classes. Mr. Diaz noticed that his results from the WES showed a higher increase of cognitive engagement than Ms. Bower's students. After a reflective session between the teachers,

Mr. Diaz realized that in his class, he offers more mini lessons on writing strategies and revising. Ms. Bower was eager to add these suggested mini lessons to her class for the next quarter and was able to see that students' cognitive engagement increased, which increased the overall engagement in writing. Collaboration between teachers who use the WES and analyze results to improve writing instruction is a win-win situation for teachers and their budding writers.

Let us explore another example. Table 3 presents sample classroom data from our dataset that have been averaged by factor for each student for a piece of writing, and Table 4 gives specific guidance on using the WES in

Table 3
Sample Classroom Data Averaged by Type of Engagement for each Student

Name	Affective engagement	Behavioral engagement	Cognitive engagement	Social engagement
Alex	3.00	3.25	4.00	3.50
Andre	3.25	4.75	5.00	4.25
Anthony	4.00	4.00	3.50	3.75
Cameron	2.50	4.50	4.50	2.75
Chris	2.75	3.00	4.75	3.50
Crystal	3.50	4.25	4.75	4.00
Davis	3.50	4.00	4.50	3.50
Destiny	3.00	3.75	4.25	2.75
Elizabeth	3.50	4.25	4.25	4.25
Emily	3.00	3.50	4.00	4.25
Fatima	4.00	4.75	5.00	4.75
Fredis	3.00	3.75	4.00	3.75
Jackson	4.25	5.00	5.00	5.00
Jordan	3.75	4.75	5.00	3.00
Jose	3.00	4.75	4.00	2.50
Laila	3.00	3.50	4.75	3.25
Max	2.75	4.25	4.25	3.00
Michael	3.75	4.50	4.00	3.25
Nathaniel	3.75	4.00	4.00	4.00
Reina	3.00	3.50	4.75	3.75
Susan	3.50	4.50	4.50	4.25
Taniya	3.75	4.75	5.00	4.75
Taylor	4.00	4.75	4.00	4.25
Ту	3.00	4.25	4.75	3.25
Wesley	3.50	4.75	5.00	4.25

# Table 4 Steps for Administering and Analyzing Student Responses

- 1. To distribute the copied Form to students, open the Form and press the "Send" button at the top right of the page. This will allow you to email the form to your students, obtain a link to your form, or embed your form into your own website
- 2. Once students have answered the survey, you can see their responses by clicking on the "Responses" tab in the Google Form. This provides you with a class summary as well as individual student responses
- 3. If you are interested in student subscale scores, you can press the "Link to Sheets" hyperlink, which is in the top right section of the "Responses" tab. Then, select "Create new spreadsheet" and press "Create."
  - a. Please note, the next part will only work if you did not change the order or number of items on the original form AND if at least one student has already completed the WES. To obtain averages for student subscales, you will copy and paste formulas from a sample Google Sheet into your own Google Sheet. To do this, go to the following link: https://tinyurl.com/WESSampleSheet
    - i. This link leads you to a sample Google Sheet based on WES responses. In this sample sheet, copy the first two rows from columns S through V.
    - ii. Next, paste these rows into your own Google Sheet's columns S through V. The numbers should change to reflect your first student's engagement subscale scores.
    - iii. In your own Sheet, select the subscale scores for your first student:
    - iv. Then, hover your mouse over the blue square at the bottom right of the section you highlighted. Your mouse cursor will turn into a cross when you hover it over the blue square. When this happens, double click the blue box to populate the rest of your students' subscale scores.

Google Forms. Looking at these class data (Table 3), we see that students' ratings of their cognitive and behavioral engagement are higher than their ratings of their affective and social engagement. As the teacher, we might consider ways to enhance students' affective and social engagement. For example, perhaps we could incorporate more choice into our writing assignments or allow more time for peer brainstorming and sharing in our writing block.

We can also use the WES results to look at specific students. Let us consider Jose's scores. He has an average of 3.00 for affective engagement, 4.75 for behavioral engagement, 4.00 for cognitive engagement, and 2.50 for social engagement. These ratings tell us that Jose was actively on task when he was working on this piece of writing (behavioral engagement). Yet, his social engagement average shows us that he did not feel compelled to engage with others while writing, and his affective engagement in the writing (i.e., interest, enthusiasm) was neutral. This information gives us much to work with in our next writing conference with Jose. We could discuss the benefits of and strategies for working with peers in the writing process to encourage more social engagement. Likewise, we can intentionally learn more about

his interests and the types of writing he likes to do to design assignments that are more affectively engaging for him. These examples illustrate how WES results can be interpreted and used to improve and individualize writing instruction.

#### Limitations

The WES is a new tool that provides teachers with valid and reliable information that they can use to better inform their writing instruction. Nonetheless, there are some limitations to its use. One limitation is its reliance on student self-report. Self-report is subject to social desirabilitywhen people respond in the way they think they are supposed to respond. Accordingly, we encourage teachers to use the WES as just one source of information to guide writing instruction, along with other data points such as observations of students, conversations with students, student work, etc. An additional limitation of this study is the gray area between the multiple dimensions of engagement (i.e., affective, behavioral, cognitive, and social engagement are not completely distinct from one another), which makes measuring student engagement difficult (Fredricks & McColskey, 2012). Future research should explore

relationships between students' writing performance and their WES results.

#### Conclusion

Student engagement is among the most pressing issues teachers face today. When students are engaged, they enthusiastically participate and use learning strategies to accomplish academic tasks. And as all teachers know, when students are disengaged, little learning happens. In this article, we make the case that teachers should pay close attention to students' writing engagement to improve their writing instruction and optimally meet students' needs. We share the WES as a valid and reliable tool that can be used to formatively assess student writing engagement quickly and easily. We know that teachers are the most important in-school factor impacting student learning, and the WES is a tool that teachers can use to provide highly effective literacy instruction.

#### Statement of Ethics and Integrity

We attest that the authors of this article maintained the highest ethics and integrity possible in completing this project.

- Our data are available upon request to Seth Parsons at sparson5@gmu.edu.
- We express our genuine appreciation for funding from the California Writing Project that supported this project.
- We have no conflicts of interest in sharing this research.
- This research was approved by the Institutional Review Boards of George Mason University, Middle Tennessee State University, and the University of California—Santa Barbara.

#### TAKE ACTION!

- 1. Assign students meaningful writing assignments that are related to their own lives.
- **2.** Gives students time to write and confer with peers and the teacher to revise their writing.
- **3.** Administer the WES when they are ready to share their writing (i.e., have a final draft).
- Use the results to design differentiated and engaging writing instruction to the whole class and individual students.

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#### **MORE TO EXPLORE**

- Edutopia 5 Ways to Increase Upper Elementary Students' Engagement in Writing
- Two Writing Teachers Podcast Action Research: Student Engagement in the Writing Workshop
- Teaching Literacy Podcast E25 | Integrating Reading and Writing with Dr. Steve Graham
- ReadWriteThink Implementing the Writing Process
- Parsons, S. A., Malloy, J. A., Parsons, A. W., & Burrowbridge, S. C. (2015). Students' engagement in literacy tasks. *The Reading Teacher*, 69(2), 223–231. 10.1002.trtr.1378.

## **Appendix A**

## **The Writing Engagement Scale**

1. When working or	n this writing assig	nment, I was interested in what I v	vas writing. (A)	
1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
2. Working on this	writing assignmen	t was boring. (A)*		
1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
3. When working or	n this writing assig	nment, I felt good. (A)		
1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
4. I would like to co	mplete a writing a	ssignment like this again. (A)		
1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
5. I stayed focused	when working on	this assignment. (B)		
1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
6. I kept trying on tl	his assignment ev	en if it was difficult. (B)		
1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree

1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
8. I worked as hard	as I could on this	writing assignment. (B)		
1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
9. When working or	n this writing assig	nment, I reread to see if I could ma	ake it better. (C)	
1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
10. When working o	on this writing assi	ignment, I thought carefully about	the words I used	I. (C)
1	2	3	4	5
strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
11. I asked myself	questions as I was	s writing to make sure my writing n	nade sense. (C)	
1	2	3	4	5
	_	9		0
strongly disagree	disagree	neither agree nor disagree t, I reviewed my writing and made	agree	strongly agree
	disagree	neither agree nor disagree	agree	strongly agree
12. When working of 1 strongly disagree	disagree on this assignmen 2 disagree on this writing assi	neither agree nor disagree  t, I reviewed my writing and made  3  neither agree nor disagree  ignment, I talked with other studen	agree changes to mak 4 agree	e it better. (C)  5  strongly agree
12. When working of 1 strongly disagree 13. When working of	disagree on this assignment 2 disagree on this writing assi	neither agree nor disagree  t, I reviewed my writing and made  3  neither agree nor disagree  ignment, I talked with other studen	agree changes to mak 4 agree	strongly agree e it better. (C) 5 strongly agree ting. (S) 5
12. When working of 1 strongly disagree	disagree on this assignmen 2 disagree on this writing assi	neither agree nor disagree  t, I reviewed my writing and made  3  neither agree nor disagree  ignment, I talked with other studen	agree changes to make 4 agree ats about my writ	strongly agree e it better. (C) 5 strongly agree ting. (S)
12. When working of 1 strongly disagree  13. When working of 1 strongly disagree	disagree  on this assignment 2 disagree  on this writing assitation 2 disagree	neither agree nor disagree  t, I reviewed my writing and made  3  neither agree nor disagree  ignment, I talked with other studen	agree  changes to make  4  agree  ats about my writ  4  agree	strongly agree e it better. (C) 5 strongly agree ting. (S) 5 strongly agree
12. When working of 1 strongly disagree  13. When working of 1 strongly disagree	disagree  on this assignment 2 disagree  on this writing assitation 2 disagree	neither agree nor disagree  t, I reviewed my writing and made  3  neither agree nor disagree  ignment, I talked with other studen  3  neither agree nor disagree	agree  changes to make  4  agree  ats about my writ  4  agree	strongly agree e it better. (C) 5 strongly agree ting. (S) 5 strongly agree
12. When working of 1 strongly disagree  13. When working of 1 strongly disagree	disagree  on this assignment 2 disagree  on this writing assign 2 disagree  this writing assign	neither agree nor disagree  t, I reviewed my writing and made  3  neither agree nor disagree  ignment, I talked with other studen  3  neither agree nor disagree	agree  changes to mak  4  agree  agree  ats about my writ  4  agree  agree  agree	strongly agree e it better. (C) 5 strongly agree ting. (S) 5 strongly agree
12. When working of 1 strongly disagree  13. When working of 1 strongly disagree  14. As I worked on	disagree  on this assignment 2 disagree  on this writing assign 2 disagree  this writing assign 2 disagree  disagree	neither agree nor disagree  t, I reviewed my writing and made  3 neither agree nor disagree  ignment, I talked with other studen  3 neither agree nor disagree  ament, I wanted to share it with oth  3 neither agree nor disagree	agree  changes to make  4 agree  agree  as about my writ  4 agree  agree  ders. (S)  4	strongly agree e it better. (C) 5 strongly agree ting. (S) 5 strongly agree
12. When working of 1 strongly disagree  13. When working of 1 strongly disagree  14. As I worked on 1 strongly disagree	disagree  on this assignment 2 disagree  on this writing assign 2 disagree  this writing assign 2 disagree  disagree	neither agree nor disagree  t, I reviewed my writing and made  3 neither agree nor disagree  ignment, I talked with other studen  3 neither agree nor disagree  ament, I wanted to share it with oth  3 neither agree nor disagree	agree  changes to make  4 agree  agree  as about my writ  4 agree  agree  ders. (S)  4	strongly agree e it better. (C) 5 strongly agree ting. (S) 5 strongly agree
12. When working of 1 strongly disagree  13. When working of 1 strongly disagree  14. As I worked on 1 strongly disagree	disagree on this assignment 2 disagree on this writing assit 2 disagree this writing assign 2 disagree this writing assign 2 disagree	neither agree nor disagree  t, I reviewed my writing and made  3 neither agree nor disagree  ignment, I talked with other studen  3 neither agree nor disagree  ament, I wanted to share it with oth  3 neither agree nor disagree  writing. (S)	agree changes to mak 4 agree ats about my writ 4 agree agree agree agree agree	strongly agree e it better. (C) 5 strongly agree ting. (S) 5 strongly agree  5 strongly agree
12. When working of a strongly disagree  13. When working of a strongly disagree  14. As I worked on a strongly disagree  15. I enjoy when my a strongly disagree	disagree  on this assignment 2 disagree  on this writing assign 2 disagree  this writing assign 2 disagree  y peers share their 2 disagree	neither agree nor disagree  t, I reviewed my writing and made  3 neither agree nor disagree  ignment, I talked with other studen  3 neither agree nor disagree  ament, I wanted to share it with oth  3 neither agree nor disagree  writing. (S)  3	agree  changes to mak  4 agree  agree  agree  ners. (S) 4 agree  4 agree  4 agree	strongly agree  e it better. (C)  5  strongly agree  ting. (S)  5  strongly agree  5  strongly agree
12. When working of a strongly disagree  13. When working of a strongly disagree  14. As I worked on a strongly disagree  15. I enjoy when my a strongly disagree	disagree  on this assignment 2 disagree  on this writing assign 2 disagree  this writing assign 2 disagree  y peers share their 2 disagree	neither agree nor disagree  t, I reviewed my writing and made  3 neither agree nor disagree  ignment, I talked with other studen  3 neither agree nor disagree  ment, I wanted to share it with oth  3 neither agree nor disagree  writing. (S)  3 neither agree nor disagree	agree  changes to mak  4 agree  agree  agree  ners. (S) 4 agree  4 agree  4 agree	strongly agree  e it better. (C) 5 strongly agree  ting. (S) 5 strongly agree  5 strongly agree

Note: Affective Engagement (A), Behavioral Engagement (B), Cognitive Engagement (C), Social Engagement (S). \*Item #2 is reverse coded.

# **Appendix B**

## Instructions for Administering the WES and Reviewing Data by Subscales

- 1. To distribute the copied Form to students, open the Form and press the "Send" button at the top right of the page. This will allow you to email the form to your students, obtain a link to your form, or embed your form into your own website.
- 2. Once students have answered the survey, you can see their responses by clicking on the "Responses" tab in the Google Form. This provides you with a class summary as well as individual student responses.
- 3. If you are interested in student subscale scores, you can press the "Link to Sheets" hyperlink, which is in the top right section of the "Responses" tab. Then, select "Create new spreadsheet" and press "Create."
- 3a. Please note, the next part will only work if you did not change the order or number of items on the original form AND if at least one student has already completed the WES-R. To obtain averages for student subscales, you will copy and paste formulas from a sample Google Sheet into your own Google Sheet. To do this, go to the following link: https://tinyurl.com/WESSampleSheet

This link leads you to a sample Google Sheet based on WES responses. In this sample sheet, copy the first two rows from columns S through V.



Next, paste these rows into your own Google Sheet's columns S through V. The numbers should change to reflect your first student's engagement subscale scores.

In your own Sheet, select the subscale scores for your first student:

Then, hover your mouse over the blue square at the bottom right of the section you highlighted. Your mouse cursor will turn into a cross when you hover it over the blue square. When this happens, double click the blue box to populate the rest of your students' subscale scores.

# Appendix C

# **Scoring Student WES Responses**

<u>Directions</u>: All item responses correspond with the numbers listed in the survey in Appendix A (i.e., "strongly disagree" = 1, "disagree" = 2, "neither agree nor disagree" = 3, "agree" = 4, and "strongly agree" = 5) except for the second item, which is reverse-scored.

For the reverse-scored item, "strongly disagree" = 5, "disagree" = 4, "neither agree nor disagree" = 3, "agree" = 2, and "strongly agree" = 1.

To compute a student's subscale score, add together the values (as described above) for each item in the subscale, then divide by 4 to find the subscale's average.

Affective engagement	Cognitive engagement
1	9
2 * Reverse-scored	10
3	11
4	12
Affective engagement raw score: /4	Cognitive engagement raw score:/4
Affective engagement (average):	Cognitive engagement (average):
Behavioral engagement	Social engagement
5	13
6	14
7	15
8	16
Behavioral engagement raw score: /4	Social engagement raw score:/4
Behavioral engagement (average):	Social engagement (average):