Making a Meme-ory: How memes can lead to increased student engagement

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Abstract: This study examines the impact of integrating memes into high school social studies classes on student engagement and learning outcomes, amid the post-COVID-19 educational landscape. Utilizing a sample of 92 participants from a rural high school in Southern Maryland, the research explores the effects of meme-based assignments on engagement levels, content accuracy, and student preferences compared to traditional lectures. While memes increased behavioral engagement and demonstrated enhanced accuracy in relating to course content, they did not significantly improve test scores. However, survey responses indicated a moderate preference for meme-based learning, suggesting its potential in fostering motivation and interest. Despite limitations, incorporating memes into teaching strategies offers a novel approach to enhancing engagement and facilitating deeper understanding of course material. Future research could further explore the efficacy of meme-based learning across different contexts.

Introduction

The purpose of this study was to determine if the incorporation of memes in a high school social studies classroom improved students' participation. From my own experience, I have been in multiple classrooms that lacked engagement (occupied within the class activity). There were no opportunities for group work, and they lectured the whole class period. This left students often unengaged, reaching for their phones or talking to someone nearby; anything to satisfy the need for engagement. This project addressed how student engagement not only increased but the overall themes that resulted from it. The intended audience for this study was other educators who are trying to increase engagement in their classroom.

Engagement is a key factor to helping students learn and grasp key concepts. It increases student motivation and helps draw on student-emotional-learning (SEL).Engagement has declined since the COVID-19 pandemic when students spent a year or more learning virtually. According to Hansen & Wilson (2023) "Universities around the world saw a drop off in student engagement with the Covid pandemic restrictions and with the likely increased student burnout coming out of pandemic there can be fatigue, doubt, cynicism, and a lack of real, meaningful engagement by many students for the next few years(10)." In the same way, high school students face similar rigorous academic demands (taking AP classes and Honors classes) leading to burnout and fatigue. Thus, just as university students need meaningful engagement, high school students also need

something new and fresh that they themselves can relate the material back to (Hansen & Wilson, 2023).

Given this, my classroom intervention strategy was to have 9th-12th grade students create memes on their computers to the assigned vocabulary in the Unit Review Guide. Students constantly engage with memes, whether consciously or not, on their phones. Memes, defined as amusing or intriguing items—such as captioned pictures or videos—that circulate widely online, particularly through social media platforms (Merriam Webster, 2024), captivate their attention. Memes are posted to social media such as Tik Tok, X, Instagram, and are easy to spread with the click of a button. Thus, given the frequency and engagement of memes, one may consider how education can also harness memes to increase student learning through engagement. Specifically, in this study, the researcher sought to determine how taking the time to create a meme increased overall student engagement in a public high school social studies classroom.

The research questions for this study were:

1. Does making an assignment that incorporates memes increase engagement?
2. Does having students make memes lead to more accuracy in the content area?
3. Do students prefer this method of learning to the traditional lecture form?

Literature Review

Existing research has indicated using memes in the classroom has positive effects on student learning(Hansen & Wilson, 2023; McBroom et al, 1994). For example, Hansen & Wilson (2023) stated "[meme-related assignments] have a positive self-efficacy for students. They are also more likely to complete the assignment because they have a sense of enthusiasm than what would typically occur in a normal homework assignment" (5). Enthusiasm and engagement work together when it comes to student learning. If a student is more enthusiastic about an assignment, then they are more likely to be engaged about it as well. This translated into increased student learning (McBroom et al, 1994).

In high school, Social Studies is a very demanding content area. It has four Advanced Placement (AP) history: AP African American Studies, AP European History, AP United States History, and AP World History: Modern. All of these courses require teachers to teach from as early as ancient civilizations to the beginning of the present day and are often taken by college bound students. Furthermore in Maryland, students are also required to pass the government HSA, often taken in their sophomore year(McBroom et. al, 1994). Given the extensive amount of content to cover, teachers revert to lecturing up to the ring of the bell rather than seeking more engaging teaching methods.

McBroom et. al, 1994). Ironically, this can lead to lower student achievement. In a study by McBroom et al, (1994) researchers examined how engaging methods influenced student achievement. For example, in a social psychology class, one class was lectured with the material and the other class learned the material through interactive activities such as discussions. The class that was not taught in a lecture format scored higher on a unit test than the class that was consistently lectured (McBroom et. al, 1994).

Defining Memes

The word "meme" from a man named Richard Dawkins (1989), who wrote in his 1989 book, *The Selfish Gene,* compared a meme to how information spreads. Dawkins

(1989) defined memes as small cultural units of transmission, similar to genes that spread from person to person by way of imitation. Even melodies, catchy phrases, clothing fashions and abstract beliefs (God) can all be considered as memes. (Dawkins, 1989). With the improvement of technology, internet memes have become more rampant since the late twentieth-century leading into the most recent decades of the twenty-first century. Oxford Online Dictionary defines a meme as 'an image, video, piece of text etc., typically humorous in nature that is copied and spread rapidly by internet users, often with slight variations' (Oxford Online Dictionary, 2018). African writer Ngugi wa Thiong'o, writes in his book, *Decolonizing the Mind*, that "language, by way of communication, is the carrier of culture"(Thiong'o, 1986). If people around the world would accept this then memes would be the best way to teach content as 'culture specific' is the best way to teach if you take into account that English is known in most countries and memes can be shared around the globe. (Harshavardhan et. al, 2019).

Memes and Youth

According to research, memes have become a common mode of communication for the youth due to their superior use of digital media (Ito et al, 2020). In pop culture, memes have been used in a variety of fashions, whether it is to poke fun at an organization, person, or object. Memes have become one of the most used weapons in the digital age. You cannot scroll through Facebook, X, or Instagram without seeing at least one meme. Memes are a digital form of interpersonal communication used by individuals in their late teens to early twenties. According to Harshardhan et al. (2019) the creator was most likely from a current high school or university aged student . Yet, the average age of the teacher in the United States is 42.4 (NCES, 2024). Thus, students never expect older teachers to get or understand the use of memes (Harshavardhan et. al, 2019). So, educators may consider asking if memes are the language of the youth, then how can educators harness them as a way to teach students? (Harshavardhan et. al, 2019). Oswald and colleagues (2014) found that using memes alongside the youth is a viable option as it can help institutions such as libraries document new expressions of culture and identity.

Lecture Style Teaching

Lecture style of teaching can be described as where the teacher sees themselves as their primary job is to teach you information by simply speaking it to you (Mohammadjani & Tonkaboni, 2015). Cooperative learning is a style of learning where students learn with each other with engaging activities in order to understand the main task (Hill, 2000). There have been many studies that show when students do cooperative learning (interactive learning), students perform better. In a study done by Knight & Wood (2017), students took the same physics class again but with different formats; the first semester was with a lecture style format and the second semester the teacher had engaging activities for the students to use. With the exams (that were different questions), students performed better on the exams and in the post survey they preferred the class with the cooperative learning format (Knight & Wood, 2017). Thus, the research indicates that this style of teaching can lead to higher test scores at the high school level.

Defining Engagement

Engagement, as defined by Fredericks et al. (2014) contains three dimensions: behavioral, cognitive, and emotional behavioral engagement, how the student interacts with in class activities, completes homework, gets along with others, and completion of assignments outside of school (Fredricks et al., 2014). Cognitive engagement refers to the amount of time that the brain puts into learning the material and whether or not learners can master it. (Fredricks et al, 2014). Specifically, a student with strong cognitive engagement is more likely to succeed on grades that are based on recall such as tests (Fredricks et al., 2014). Cognitive engagement also puts emphasis on key thinking skills that a student needs to succeed including monitoring, metathinking, and planning (Fredricks et al., 2014). Finally, emotional engagement puts a key recognition on your emotions in your environment; this includes if students feel like they belong or not with other students and your teachers. It is critical to remember with emotional engagement that if you do not feel connected to the academic material that you are learning then your self-efficacy will decrease (Fredricks et al., 2014).

Memes and Engagement

There are studies that show when you create activities related to memes, engagement increases (Basac, 2017). Tu and colleagues completed a study where every student had to make a meme that was related to the course content and then conducted a survey after (2022). They found that there were four themes: students could understand the course content through different modalities, they engaged in course content, connected with peers through humor, and created a relaxed environment to learn (Tu et al, 2022). Similarly, in another study by Basac (2017), The researcher investigated whether incorporating memes could enhance students' learning in the 21st century. He also found that there were a variety of themes: a push in students' readiness to learn, a realization of the 21st century learning environment, a reduction in stress and anxiety, innovation and commission, and observation and reaction (Basac, 2017).

Student Engagement Importance

Studies have shown that the more students are engaged in their classwork, the more they are likely to perform better academically, socially and remain in school (Antaramian et al., 2010; Finn, 2016; Fredricks et al., 2014). According to a study conducted by Antaramian, et al. (2010), all three components of engagement are positively correlated with indicators of student wellbeing (SWB). High positive SWB means that students have more positive attributes such as less rule breaking and aggression (Antaramian et al, 2010).

In regards to retention, a longitudinal study conducted by Finn (2016) determined that students who were engaged in eighth grade had a greater chance of enrolling and graduating college. Furthermore, student engagement had a direct link to students who happened to drop out of high school (Finn & Rock, 1997). According to the Finn & Rock (1997), students who dropout of high school most likely do it because they lack the proper engagement that is needed whether it is behavioral, cognitive, or emotional. Thus, from their work, educators know that if students are not engaged in class, the student is most likely going to perform poorly in the class and possibly leave school altogether (Finn & Rock, 1997).

In another study, research found similar results. A longitudinal study was conducted with two samples of two generational French-Canadian found that all three types of engagement (cognitive, social, emotional) anticipated whether or not students would drop out of high school (Janosz et al, 1997). However, in a larger longitudinal study, researchers found that only behavioral engagement was only an anticipator of whether or not a student would drop out of high school (Archambault et al, 2009). Further research should be conducted to determine the impact of all three types of engagement. However, all the researchers found that behavioral engagement moderates the relationship between both cognitive engagement and emotional engagement and becoming a high school dropout (Archambault et al, 2009).

Attendance plays an important role in education. Engagement has proven to have a correlation with attendance. A study found that students who feel that the course is engaging are more likely to show up (Crede, M., Roch, S. G., & Kieszczynka, U. 2010).

Research Questions

By the end of my classroom intervention, I wanted to be able to answer the following questions:

1. Does making an assignment that incorporates memes increase engagement?
2. Does having students make memes lead to more accuracy in the content area?
3. Do students prefer this method of learning by creating memes to the traditional lecture form?

Intervention

My intervention was trying to solve the problem of engagement by using a new and more modern engaging teaching tool to help students want to actively participate and learn in the form of memes. I wanted to prove that students can learn just as much if not more than if they were to be lectured on the same material in the History context. First, I had half of the classes learn the content through the creation of memes (periods 3 and 7) and the other half will be learning the vocabulary through traditional lecture style (periods 4 and 8). The first day both the meme group and the lecture group took a pretest on the vocabulary test. I explained to both groups what I am looking for in their answers. The second day, the meme group had one class period to create at least three memes for ten vocabulary words. Then for the third day, we went over everyone's memes that they made and what they mean and how we can relate them to the vocabulary terms. The fourth day we had the vocabulary test. For the vocabulary test students were given five of those ten words and had to identify who or what it is and why it is significant. For the non-meme creating group, the second day we will practice DBQ (Document Based Question) activity. The third day I taught them the ten vocabulary words in a lecture style format. I am doing that in this order because I cannot stretch teaching six vocabulary words across two class periods. The fourth day they had the vocabulary test. The test will be for a product grade (70%). After both groups took the test, I compared the results and administered a survey to the meme group. It asked them questions such as "do you like being lectured to?", "On a scale from 1-5 how much did you like making memes?", "Making memes helped me learn the content more than a traditional lecture format" with a variety of options available.

Methods & Data Sources

I conducted my research at a rural high school in Southern Maryland. There was a total of 92 participants in this study. The sex demographics were nearly even; there were 43 male participants and 49 female participants. There are a total of 75 students that are enrolled in Advanced Placement (AP) World History. Six of the students had learning disabilities that qualified them for 504 or Individual Education Plans (IEPs).

I answered my questions through a convenience sample. the data sources I used were: observation in the form of a behavioral checklist [see appendix], journal (overall impression of how the activity went, and have focus students (four students) using the guidelines that I set up in my instruments, test content of memes/lecture, accuracy of content and memes, and a survey. I used them to answer my research questions as follows in Table 1. Table 2 (see appendix) reflected my intervention schedule and my questions that I answered after each period.

Table 1: *Research questions and data sources*

	Data source 1	Data source 2	Data source 3
Does making an assignment that incorporates memes increase engagement?	Behavior Checklist	Journal (Overall Impressions)	Survey
Does having students make memes lead to more accuracy in the content area? Do students prefer this method of learning by creating memes to the traditional lecture form?	Overall test scores of the vocabulary test from both the groups who learned through lecture and memes.	Accuracy with the memes (are the memes actually accurate).	Survey
	Survey	Journal (Observations)	

Data Analysis

The first piece of data that was analyzed was the average of each classes scores on the vocabulary test. That will help answer my second question if using memes led to more accuracy in the content area. I also analyzed the survey and looking for the results if

students preferred traditional lectures or making memes. I also looked at the themes that come out of the extended response portion of the survey where students list how the activity went for them. The behavioral checklist will be used to help be answer my first research question as the behavioral checklist measures engagement. Next, I will be using a journal for data where I will write down how the activity went and other topics that I noticed to help answer my first and third research question.

Validity Concerns

To address any validity concerns, I had my mentor teacher teach the lecture style classes that received direct instruction. This avoided any bias that I purposefully underperformed as a teacher to tilt the results. I also debriefed with my mentor teacher and students after so they do not think I had any biases against the classes that received the lecture format.

Results

Does Making an Assignment That Incorporates Memes Increase Engagement?

Regarding the behavioral checklists, I noticed some patterns between the groups of students who were in the meme groups and who were not in the meme group. For example, students in the non-meme group were on their phones thirteen times more than students who were in the meme group. Students in the meme group only showed signs of being withdrawn (tracked by if the student spent one minute not doing the activity) five times while students in the non-meme group showed signs of being withdrawn eighty-four times. Students also showed more signs of joy in the meme group with nine times compared to the six times in the non-meme group. However, students showed more engagement in the non-meme group with 134 tallies compared to fifty-eight tallies. This contrasted with journal entries. I wrote "students seemed to be on task, engaged and excited when they were learning. They smiled and laughed, while they chose which meme goes with which vocabulary word."

Finally, with the survey that was conducted there was a question that asked on a scale of one to five "I was more engaged in class with memes than I normally was" the average answer was a 3.07. Also, someone wrote in an extended response "I liked this activity. I was more engaged and studied more and I feel I did better on this quiz than most because I knew what I was doing."

Does Having Students Make Memes Lead to More Accuracy in the Content area?

I compared the test scores of the meme group and the non-meme groups. Students using memes to learn content for a summative assignment did not have better results. Overall, they mostly stayed the same. Periods 3 and 7 had more C's and D's while periods 4 and 8 had more A's and B's. The average score on the vocabulary test (out of 20) for period 3 was 13.75, period 4, it was 16.5, period 7 a 16, and finally period 8 a 16.5.

Finally, I noticed that students who were in the meme group for the third period performed twice as well on the test than the pre-test. For the seventh period class (other meme group) they performed three times better on the test compared to the pre-test. Overall, the accuracy in terms of the memes and relating it to the vocabulary words made me extremely happy. Below are some examples:

Figure 1: Vocabulary Word: Cottage Industry and the rise of factories

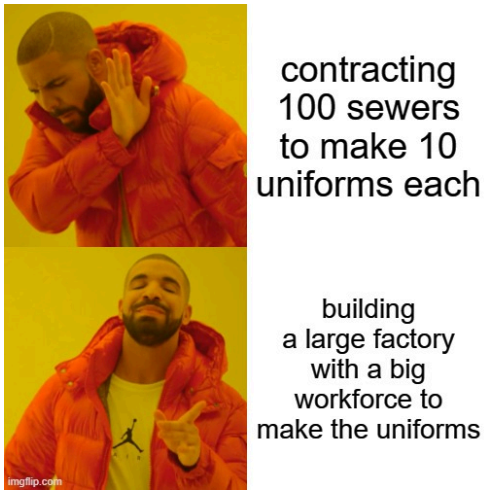
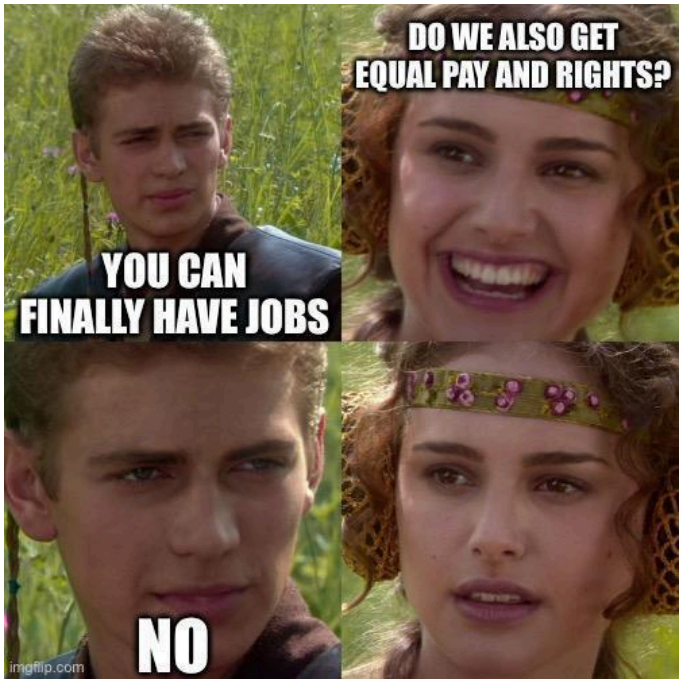


Figure 2: Vocabulary Word: Women's Rights during the Industrial Revolution



These memes that students made were accurate to me because in these it almost defines the vocabulary term/phrase in the meme which is what I was looking for. Finally, in the survey of why students consistently made accurate memes. When asked in the survey to rank on a scale of 1 to 5 if they are familiar with memes and how they work the average score was a 4.38. There was also a pattern that students showed during the survey that they took. When asked for their thoughts on the activity one student said “I created these memes and I was able to put an image in my head when thinking of the term. I was able to remember these terms way better than I would've if I didn’t make the memes.”

Do Students Prefer This Method of Learning by Creating Memes to the Traditional Lecture Form?

In the survey one question stated "I found that creating memes helped me learn the content more than a traditional lecture." On a scale of one to five the average response was a 3.07. I also took journal observations as well to support this question. One student said "They wish they could do this everyday instead of sitting still all day listening to someone speak."

Discussion of Results

Overall, I found that my results did match my literature review in some aspects. Fredericks et al., 2014 stated that incorporating memes in classrooms will help increase engagement. However, I found that although memes did increase engagement, it was not enough to produce better test scores.

I do wonder if I had just done my intervention with periods 4 and 8 (the classes with better overall grades) if my results would have turned out the opposite (saw that memes do increase the grades of students).

Conclusions and Implications

Overall, I wanted to analyze how incorporating memes into the classroom would affect student learning and engagement as opposed to the traditional lecture format. All too often, classroom environments lack engaging activities because students are often stuck to their seats disengaged listening to a teacher talk to them about material instead of engaging with the material itself.

Limitations

One limitation that I found that a major limitation of the study was not being able to do this experiment again but switching the classes that used memes. I only had so much time to work with and I wanted to experiment with the classes that were struggling to see how big of an impact there would be from the pre to post test (which there was).

Another limitation was that I could not move students into specific groups based upon their performance level in the class because I could not physically take someone who was lower performing from period 4 (high performing group) and switch their schedule to be in period 3 (low performing group). I believe had I done that, I could have formed more accurate conclusions from this study.

Implications

I believe that there could be major implications for this study. I think that the results from the survey conducted during this study show that incorporating memes while learning should be practiced in the classroom. I believe that teachers should echo this teaching strategy at least once every two weeks. It promotes engagement in the classroom which is always a good characteristic of classroom management.

My research can connect to engagement theory (cognitive branch) (Vygotsky, 1978). From the survey, more students are likely to attend class if they knew they were going to be doing this type of activity. Also, for classes to have performed two and three times better

from their pre to post test scores is incredible! For future research, I would like to conduct the same experiment but with different grade levels and see the difference. Would I get the same results?

Overall, research indicates that engagement is a necessity for student learning. When students are consistently listening to someone speak at them instead of engaging with the material they lack interest. Memes can provide teachers with one additional engagement strategy to increase student learning.

References

Antaramian, S. P., Huebner, E. S., Hills, K. J., & Valois, R. F. (2010). A dual‐factor model of Mental Health: Toward a more comprehensive understanding of youth functioning. *American Journal of Orthopsychiatry*, *80*(4), 462–472. https://doi.org/10.1111/j.1939-0025.2010.01049.x

Archambault, I., Janosz, M., Morizot, J., & Pagani, L. (2009). Adolescent behavioral, affective, and cognitive engagement in school: Relationship to dropout. *Journal of School Health*, *79*(9), 408–415. https://doi.org/10.1111/j.1746-1561.2009.00428.x

Baysac, P. E. (2017). Laughter in class: Humorous memes in 21st century learning. *Journal of Social Sciences)*, *6*(2), 267–281. https://doi.org/10.25255/jss.2017.6.2.267.281

Bundick, M. J., Quaglia, R. J., Corso, M. J., & Haywood, D. E. (2014). Promoting student engagement in the classroom. *Teachers College Record: The Voice of Scholarship in Education*, *116*(4), 1–34. https://doi.org/10.1177/016146811411600411

Dawkins, R. (1989). *The selfish gene*. Oxford University Press.

Crede, M., Roch, S. G., & Kieszczynka, U. M. (2010). *Class attendance in college: A meta-analytic review of the relationship of class attendance with grades and student characteristics. Review of Educational Research, 80(2), 272-295.* https://journals.sagepub.com/doi/full/10.3102/0034654310362998

Finn, J. D., & Rock, D. A. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology*, *82*(2), 221–234. https://doi.org/10.1037/0021-9010.82.2.221

Finn, J.D. (2006). The Adult Lives of At-Risk Students: The Roles of Attainment and Engagement in High School. (NCES 2006-328). U.S. Department of Education, Washington, DC: National Center for Education Statistics

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, *74*(1), 59–109. https://doi.org/10.3102/00346543074001059

Hansen, J. M., & Wilson, P. (2023). Increasing student engagement using ‘meme based’ Exercise Innovation. *Marketing Education Review*, *33*(2), 113–117. https://doi.org/10.1080/10528008.2022.2159436

Harshavardhan, V., David Wilson D, & Kumar, M. V. (2019). Humour discourse in internet memes: An aid in ESL classrooms. *Asia Pacific Media Educator*, *29*(1), 41–53. https://doi.org/10.1177/1326365x19842023

Hill, K. A. (2000). Cooperative learning as a mean of improving social skills among middle grade students.

Retrieved from http://www.Usoe. K12.ut.US/oals 2000/Kathy–hill–cooperative Learning.htm

Janosz, M., LeBlanc, M., Boulerice, B., & Tremblay, R. E. (1997). Disentangling the weight of school dropout predictors: A test on two longitudinal samples. *Journal of Youth and Adolescence*, *26*(6), 733–762. https://doi.org/10.1023/a:1022300826371

Knight, J. K., & Wood, W. B. (2017). Teaching more by lecturing less. *Cell Biology Education*, *4*(4), 298–310. https://doi.org/10.1187/05-06-0082

McBroom, W. H., & Reed, F. W. (1994). An alternative to a traditional lecture course. *Teaching Sociology*, *22*(4), 328. https://doi.org/10.2307/1318925

Mohammadjani, F., & Tonkaboni, F. (2015). A comparison between the effect of cooperative learning teaching method and lecture teaching method on students' learning and Satisfaction Level. *International Education Studies*, *8*(9). https://doi.org/10.5539/ies.v8n9p107

Thiong'o, N. wa. (1986). *Decolonising the mind: The politics of language in African literature*. James Currey.

Tu, K., Sun, A., & Levin, D. M. (2022). Using memes to promote student engagement and classroom community during Remote Learning. *Biochemistry and Molecular Biology Education*, *51*(2), 202–205. https://doi.org/10.1002/bmb.21700

Appendix

Appendix A :Table 2 Intervention and Reflection Question

Period	Type of Instruction	Question(s) That Will be Answered
1-		
2- Planning	N/A	
3- AP World History	Creating Memes	Journal (Overall impressions) 1.)What happened in on-level World History with memes? 2.)How engaged were students? 3.)What about the focus students (I will be using focus students as a data source). 4.)Did I see anyone using the content? If so, was it accurate?
4- AP World History	Lecture Instruction	
5-		
6- Lunch	N/A	1.)How engaged were students 2.)What happened in AP World History with lecture format? 3.)Were they engaged?
7- AP World	Creating Memes to learn	
8- AP World	Lecture Instruction	
9- After School	N/A	1.)What happened in AP with memes? 2.)How engaged were they? 3.)Did they seem to like the memes?

Appendix B: Post Survey given to the students who used Memes to Learn

MRP

* Indicates required question

Email *

Record my email address with my response

I am familiar with memes *

	1	2	3	4	5	
Strongly Agree	○	○	○	○	○	Strongly Disagree

Did you like creating memes in class? *

- ○ Yes
- ○ No

I found that creating memes helped me learn the content more than a traditional lecture. *

1	2	3	4	5

Appendix C: Behavioral Checklist

Behavioral Checklist

Directions: Watch each student for 30 seconds and put one tally mark for each observed behavior. Then move on to the next student and do the same. Continue cycling through students in this manner for 30 minutes – if the student is doing the same behavior when observed the second time, that becomes a second tally mark. The purpose of doing so is *not* to get an accurate description of each students' behavior. Rather, this is a way to systematically measure the behavior of the class as a whole.

Student	Checks Phone	Withdrawn (Spends 1 minute not doing the activity)	Engaged in the activity (has spent 2 consecutive minutes doing the activity	Showed signs of joy (smiled, laughed, acted playful)
PD 1 Student 1				
PD 1 Student 2				
PD 5 Student 1				
PD 5 Student 2				
Totals				