2-2015

From Assistive to Transformative Technology: Using Microsoft PowerPoint to Revolutionize Student Learning

Michelle Fowler
Clemson University

Tracy Butler
Clemson University, tracyb@g.clemson.edu

Recommended Citation

Fowler, Michelle and Butler, Tracy, "From Assistive to Transformative Technology: Using Microsoft PowerPoint to Revolutionize Student Learning" (2015). *Presentations*. 2.
https://tigerprints.clemson.edu/eugene_pres/2

Michelle Fowler
mfowle4@g.clemson.edu
Tracy Butler
tracyb@g.clemson.edu

From Assistive to Transformative Technology: Using Microsoft PowerPoint to Revolutionize Student Learning

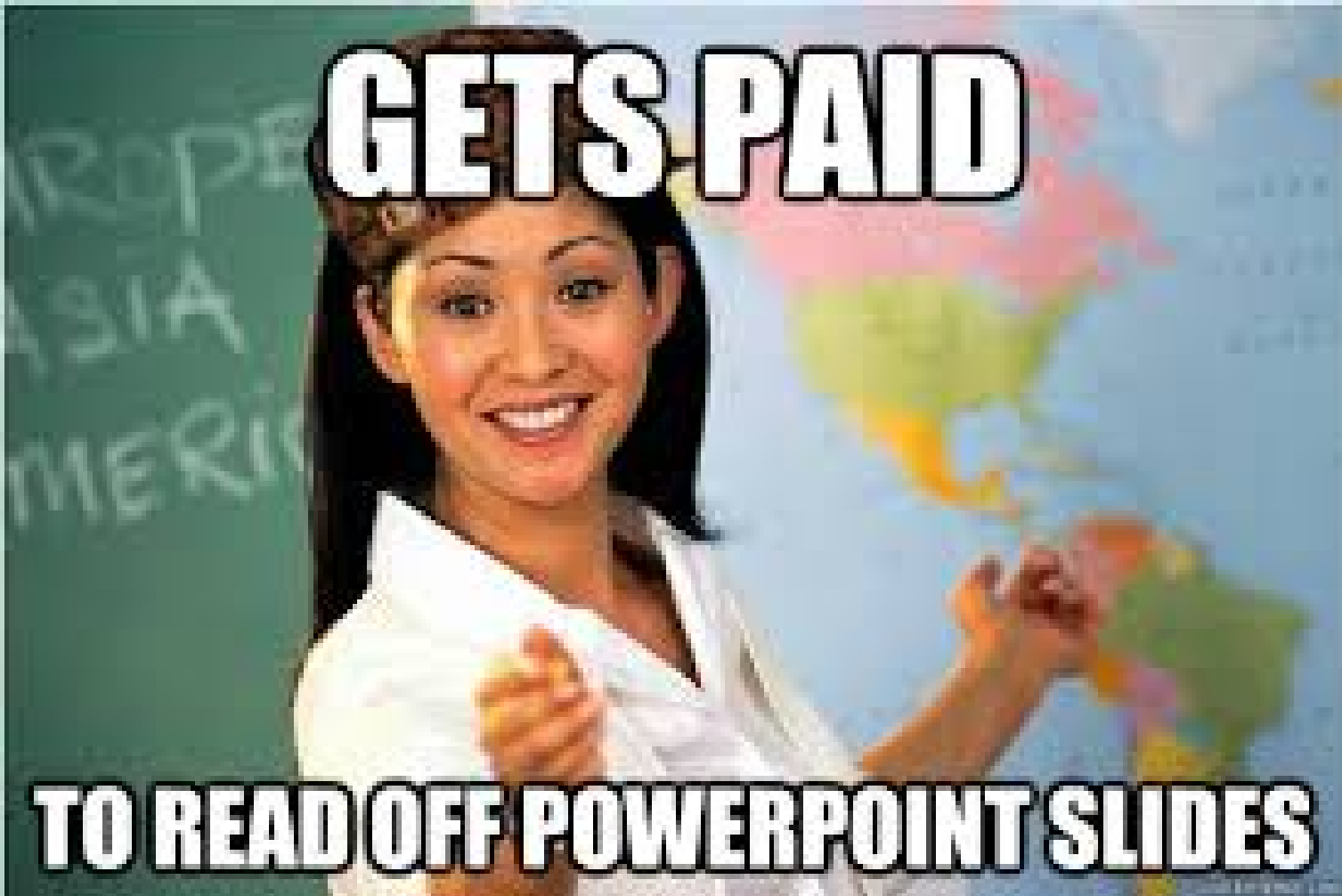* 30 million PowerPoint presentations occur everyday

* 1.25 million presentations occur every hour

* PowerPoint is estimated to be on 250 million computers

(Mahin, 2004)

* PowerPoint is Everywhere

*So, what's "wrong" with using PowerPoint in the classroom?

DEATH BY POWERPOINT

Slow and painful.

fakeposters.com

* Mixed conclusions about PowerPoint (PPT) when researched in isolation from other technologies

* Teacher-led PPTs have little to no impact on student achievement

* PPT has a significant impact on student perception: they enjoy PPTs!

    * Increases "learning, organization, and note-taking"

    * Increases student engagement and interest

(Hill, Arford, Lubitow & Smollin, 2012, p. 243)

*The Research on Teacher-Led PowerPoints

* Simplification vs. oversimplification
  * Simplification makes complex concepts or information easier to understand (a form of scaffolding)
  * Oversimplification degrades the relationships between ideas and decreases critical thinking
* "The loss of breadth, depth, and complexity results in the transmission of material that is at best deficient and at worst so simple it belies the nature of course content."

(Hill et al., 2012, p. 243)

* Content Facilitator or Content Destructor?

*"As educators we have to balance time constraints and desired learning objectives with students' own creativity."

(Freeman, 2000)

*What is the ultimate goal of the assignment?

*What do you as the teacher want students to have learned?

*How will they learn that information?

*Teacher Goals

* Student-Created PowerPoints

* High comfort level
    * Learn PPT in early elementary school
* Engenders confidence and high self-efficacy
* Less daunting than other assignment types
* Easy assignment for teachers to manage and grade

* Benefits of Student PowerPoint Creation

*Creativity
  *Pictures, videos, sounds, transitions, colors
  *Individuality
  *Ownership of learning

*Organization of text and ideas
  *Compartmentalization of complex concepts

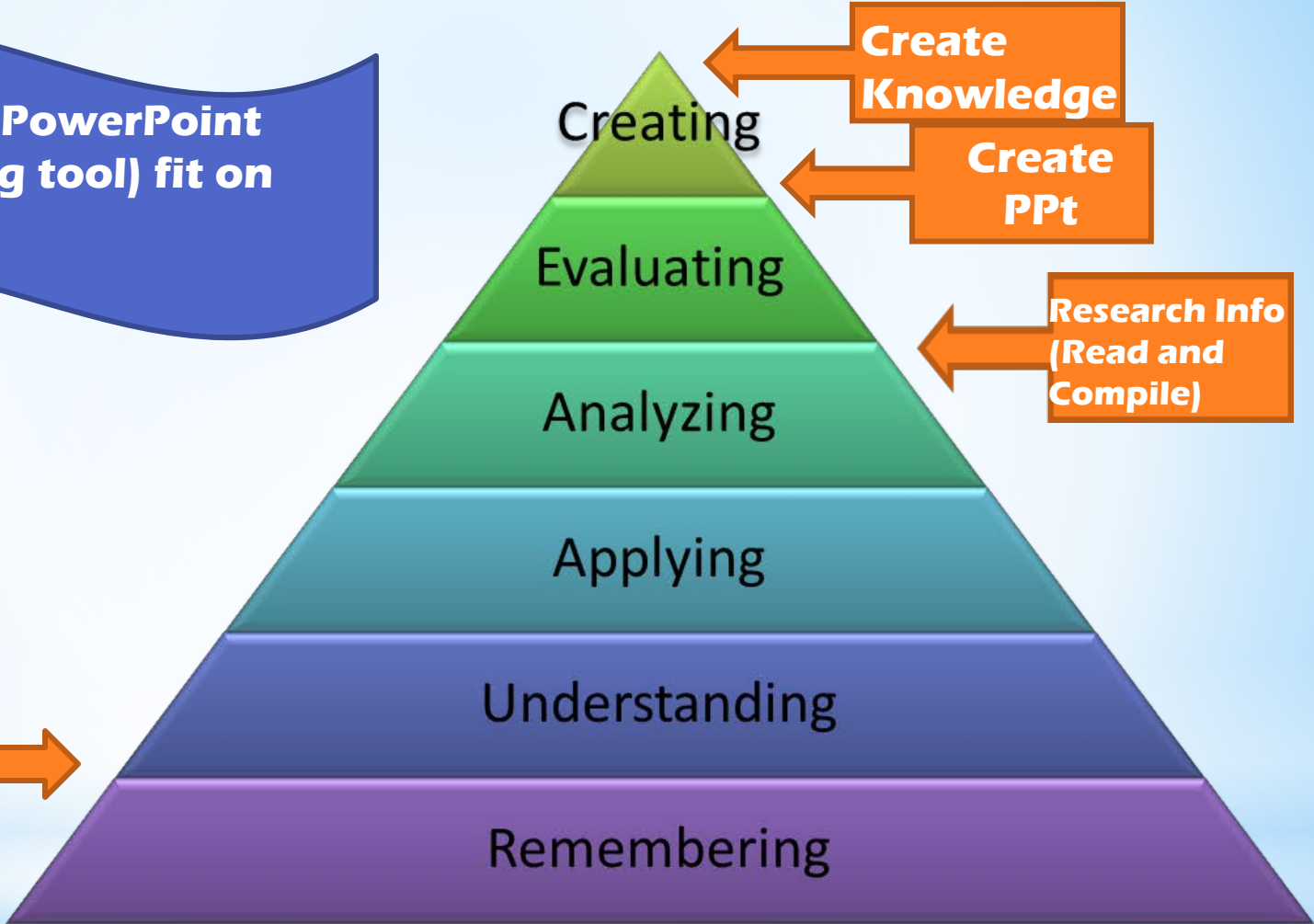# *Benefits of Student PowerPoint Creation

* "Key features of active learning—discussions and exchanges, questions, improvisations, and off-the-map developments—ensure that learners actively participate in knowledge creation rather than simply passively consume information."

(Hill, A., et al., 2012, p. 251)

* # Does making PowerPoint constitute active learning?

Assistive Technology

- Supplements student learning

- Does not significantly <u>increase</u> student learning

- Replaces "low-tech" methods such as using a PowerPoint as a virtual poster

Transformative Technology

- Transforms student learning by facilitating something that would be impossible without the technology tool

- Significantly <u>increases</u> student learning

8th-Grade Language Arts

Scary Story PowerPoint Project

* Students followed the typical narrative creation process to compose scary or suspenseful stories:

  brainstorming →rough draft→final draft

* However, the final draft was a PowerPoint presented to the class, which included:

  * Student choice of font and slide design
  * Pictures, sound effects, and music

*Examples of "Transformative" PowerPoint Projects

- *Compartmentalization
  - *Story part delineation (e.g., introduction, rising action, climax)
  - *Alleviation of fear of all the story elements they were required to include:

    [Story Map](#)

  - *Recognition of how the parts integrate together to create a unified whole

    [Student Example](#)

*Harnessing PowerPoint's Attributes

*Fosters significant creativity
  *Narrative writing
  *Illustrations
  *Sounds effects and music

*Presentation skills
  *Reading stories aloud to the class
  *Oral editing
  *More engaging for the audience

*Harnessing PowerPoint's Attributes

*CCSS.ELA-LITERACY.W.8.3.B

*Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters.

*CCSS.ELA-LITERACY.SL.8.5

*Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.

*Connection to Common Core State Standards

*Word problem typed onto a PowerPoint slide

*Solved step by step (slide by slide)

*Illustrated with pictures, sound effects, and music

*Harnessing the compartmentalization of information along with creativity

*Presenting/explaining to the class

*Or...do all this in reverse

*Math transformative PowerPoint example

*CCSS.MATH.CONTENT.6.EE.B.6

Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.

*<u>Example 1:</u> Five friends split a pizza that costs $16.75. If they shared the bill equally, how much did they pay?

*Connection to CCSS

* Students will video a scientific phenomenon, such as forces acting on a mechanical car.
* They will insert their video onto a PPT slide.
* They will create step-by-step explanation of the phenomenon, including pictures and sounds.
* Presentation and audience feedback.

* Idea by Paula Evans, science teacher at Hillcrest Middle School

* Science transformative PowerPoint example

*8.P.2: The student will demonstrate an understanding of the effects of forces on the motion and stability of an object.

*Connection to 2014 SC Science Standards

* Change over time
  * Use successive slides with maps and/or pictures to show and analyze regions' change over time
  * Integrate primary and secondary sources to support analysis of the change

  * Idea by Karen Ambrose, social studies teacher at Hillcrest Middle School

* Social studies transformative PowerPoint example

*8-5.7 Compare migration patterns of South Carolinians to such patterns throughout the United States, including the movement from rural to urban areas and the migration of African Americans from the South to the North, Midwest, and West.

*Connection to 2011 SC Social Studies Standards

* "At the classroom level…helping students not only use technology as an instructional aid but also master technology as a medium of communication, research, and knowledge production" is important.

(Warschauer, 2002, p.472)

* Background knowledge, useful vocabulary, visuals, modified text, & teacher/student scaffolding are helpful to ELs.

* Allow students to voice record instead of present in person.

* Allow ELs to use native words in their project & presentation.

* Advance practice before presenting a PPT is important to correct mistakes in grammar or vocabulary and improve fluency.

(Hur & Suh, 2012)

* PowerPoint and English Learners (ELs)

- **Can you brainstorm a <u>transformative</u> PowerPoint project or mini-project for your content area and grade level?**

* PowerPoint is an invigorating, transformative tool in all subject area classrooms for

  * Improving learning, especially analyzing and understanding relationships between concepts and parts of a whole
  * Fostering creativity and ownership of learning
  * Assisting in improving presentational skills
  * Increasing student engagement

* All students have the ability to develop a PPT with scaffolding from the teacher

* Conclusion

* Common Core State Standards Initiative. English language arts standards. *Retrieved from www.corestandards.org*.

* Common Core State Standards Initiative. Math standards. *Retrieved from www.corestandards.org*.

* Freeman, C. (2000). At the Head of the Class. *THE Journal (Technological Horizons In Education)*, *27*(6), 56.

* Hill, A., Arford, T., Lubitow, A., & Smollin, L. M. (2012). "I'm ambivalent about it: The dilemmas of PowerPoint. American Sociological Association, 40(3), 242-256.

* Hur, J. W., & Suh, S. (2012). Making learning active with interactive whiteboards, podcasts, and digital storytelling in ELL classrooms. *Computers in the Schools*, *29*(4), 320-338.

* Mahin, Linda. 2004. PowerPoint Pedagogy. *Business Communication Quarterly*, *67*(2), 219–22.

* South Carolina Department of Education. 2011 social studies standards. *Retrieved from ed.sc.gov.*

* South Carolina Department of Education. 2014 science standards. *Retrieved from ed.sc.gov.*

* Warschauer, M. (2002). A developmental perspective on technology in language education. *TESOL quarterly*, *36*(3), 453-475.

*Works Cited

*Brace Yourselves: www.beta.diylol.com

*Cognitive Domain: www.purdue.edu

*Death by PowerPoint: www.fakeposters.com

*Gets Paid: www.quickmeme.com

*How I See Math: www.d3m0n-n3k0-w0lf-l3n.deviantart.com

*James's PowerPoint: www.makeameme.org

*Puts Memes in PowerPoint: www.beta.diylol.com

*Picture Citations