

Reinvent the wheel...

...and put it on the
road to learning!

The Intersection of Blooms, TPACK, NETS,
the Common Core, and SAMR...

Schoology

4VJBZ-99FFD

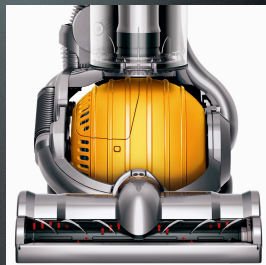
(Session 2 and 6)

Twitter #masscue2013

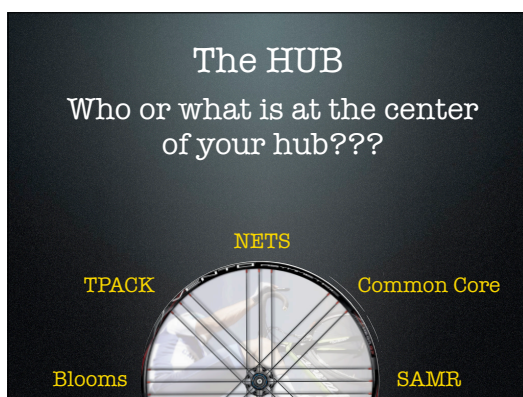
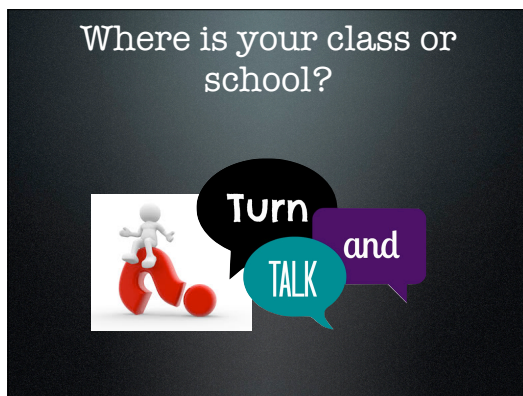
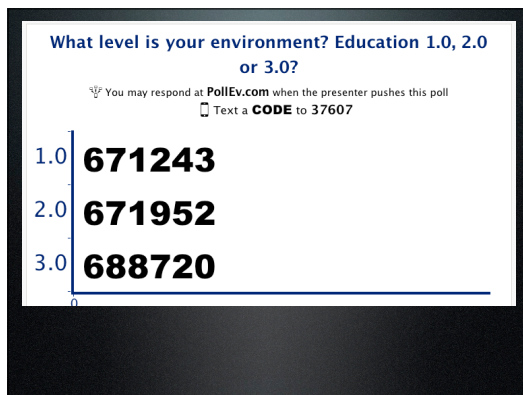
There are wheels...



...and there are wheels!



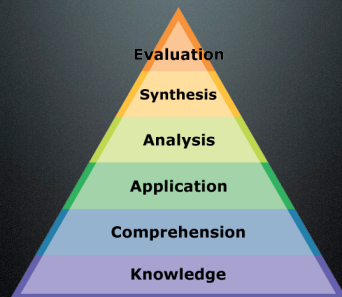
	Education 1.0	Education 2.0	Education 3.0
Meaning is...	Dictated	Socially constructed	Socially constructed and contextually reinvented
Technology is...	Confiscated at the classroom door (digital refugees)	Cautiously adopted (digital immigrants)	Everywhere (ambient, digital universe)
Teaching is...	Teacher-centered	Student-centered	Student-centered, self-directed, and collaborative
Learning is...	One-size-fits-all	Personalized	Personalized and self-directed
School is...	A place where students go to learn	A place where students go to learn	A place where students go to learn, work, and play
Parents view school as...	A place where their children go to learn	A place where their children go to learn	A place where their children go to learn, work, and play
Teachers view school as...	A place where they go to work	A place where they go to work	A place where they go to work, learn, and play
Hardware and software in schools...	Are purchased at great cost and ignored	Are open source and available at lower cost	Are available at low cost and are used purposefully
Industry views graduates as...	Assembly line workers	As ill-prepared assembly line workers in a knowledge economy	As co-workers or entrepreneurs



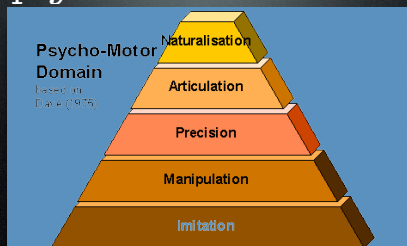
The wheels...

- Blooms Taxonomy / New Blooms
- TPACK
- NETS-S and T, A, C, & CS
- CCSS / MassCORE
- SAMR

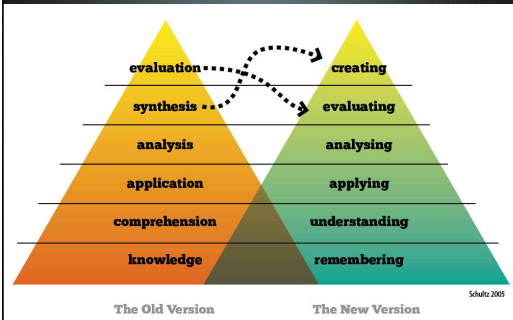
We often see this...

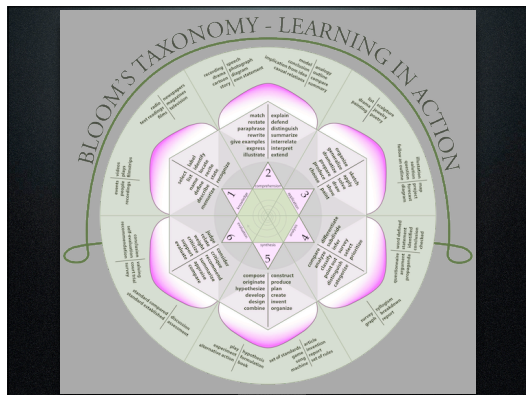
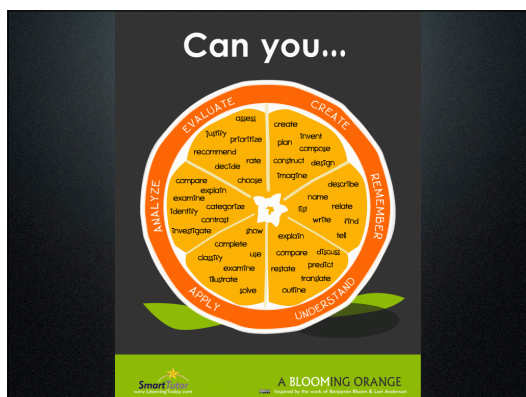
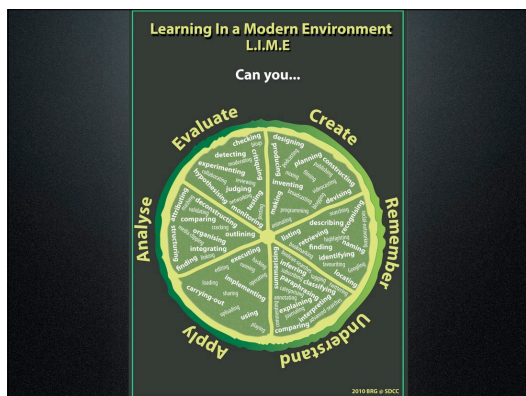
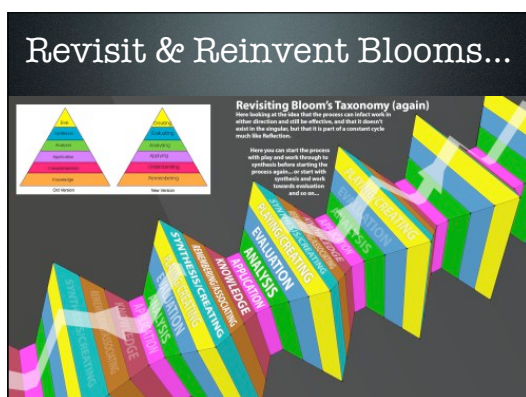


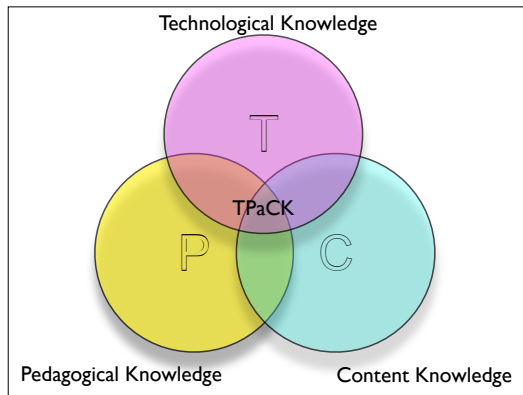
As a PE Major we focused on Bloom's psychomotor domain...



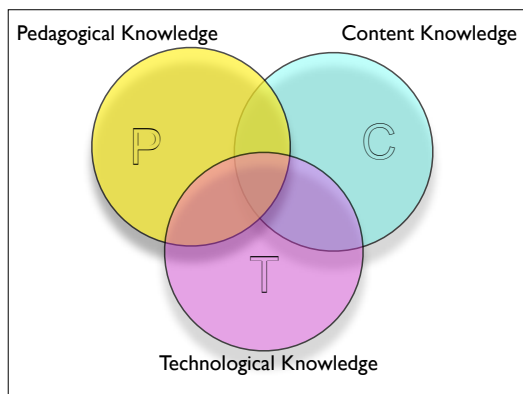
Bloom's Old and New

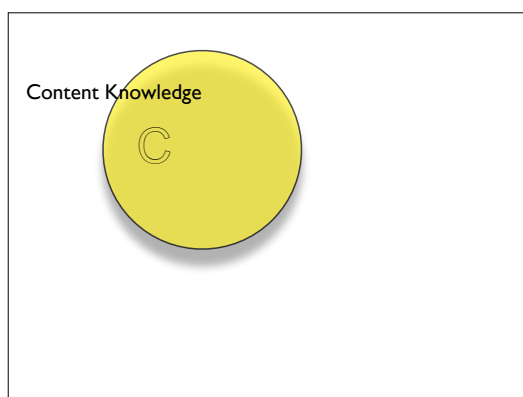


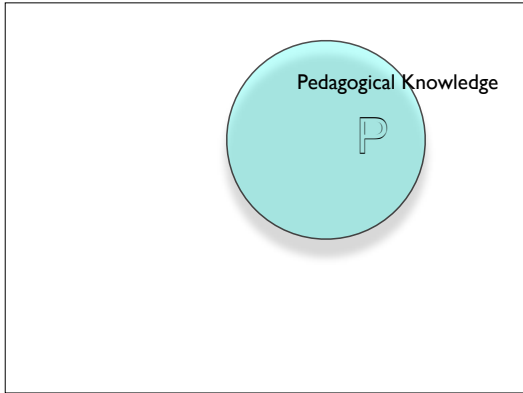
This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. On the left side, there is a vertical margin line, creating a narrow left margin. The paper appears to be from a notebook or a standard ruled document.[illegible][illegible][illegible]

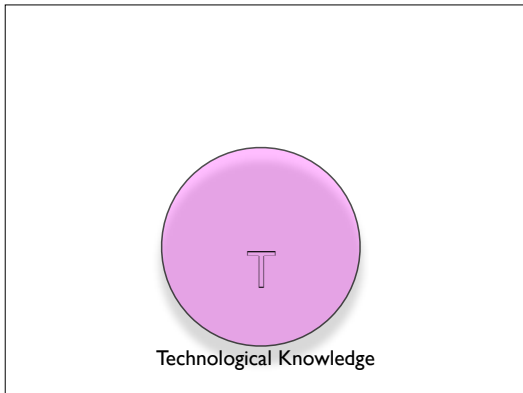


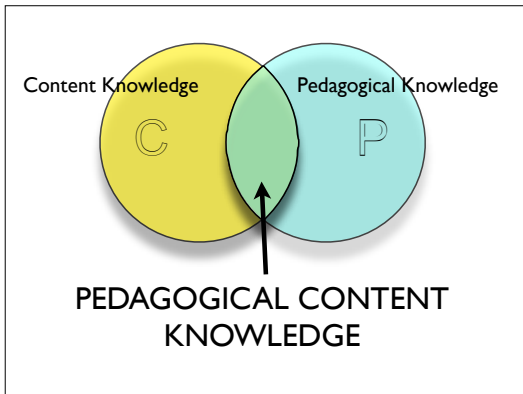


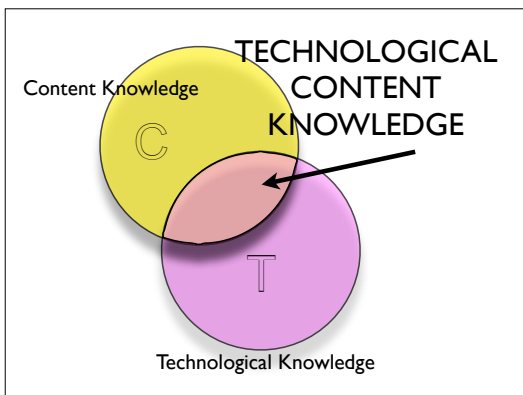


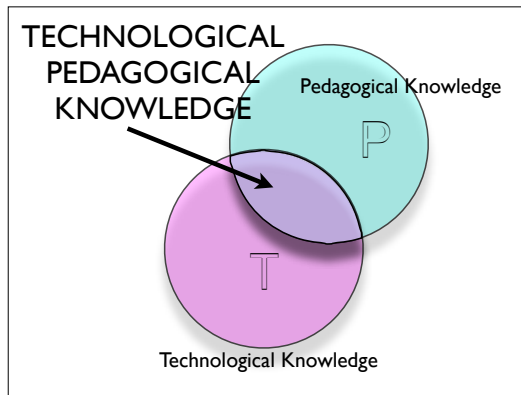


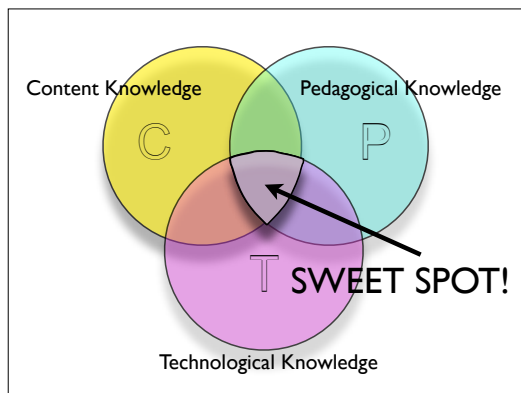


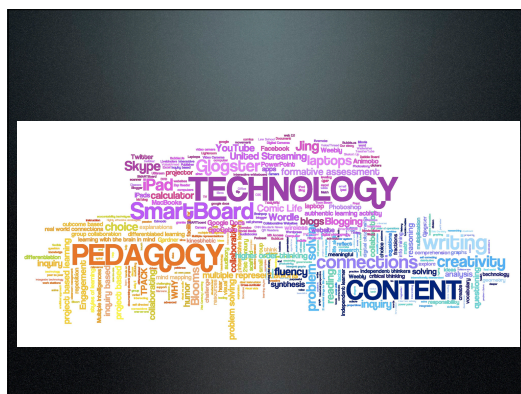














Another new wheel...



Are you familiar with...

- Blooms Taxonomy / New Blooms
- TPACK
- NETS-S and T, A, C, & CS
- CCSS / MassCORE
- SAMR

NETS Standards

- NETS-Students
- NETS-Teachers
- NETS-Administrators
- NETS-Coaches
- NETS-Computer Science

NETS for Students K-12

Standard 1: Creativity & Innovation

Standard 2: Communication & Collaboration

Standard 3: & Information Fluency

Standard 4: Critical Thinking, Problem Solving,
& Decision Making

Standard 5: Digital Citizenship

Standard 6: Technology Operations & Concepts

ISTE NETS for Teachers

Standard 1: Facilitate and Inspire Creativity & Innovation

Standard 2: Design & Develop Digital-Age Learning Experiences & Assessments

Standard 3: Model Digital-Age Work & Learning

Standard 4: Critical Thinking, Problem Solving, & Decision Making

Standard 5: Engage in Professional Growth & Leadership

The ISTE NETS and Performance Indicators for Teachers (NETS-T)

Are you familiar with...

- Blooms Taxonomy / New Blooms
- TPACK
- NETS-S and T, A, C, & CS
- CCSS / MassCOR.E
- SAMR



Another wheel...



Common Core State Standards as they relate to Technology Grades 1-8

Grade 1

- 1.RI.5 Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.
- 1.W.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.
- 1.W.7 Participate in shared research and writing projects (e.g., explore a number of "how-to" books on a given topic and use them to write a sequence of instructions).

Grade 2

- 2.RI.5 Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
- 2.W.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.
- 2.W.7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report, record science observations).
- 2.SL.5 Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.

Grade 3

- 3.RI.5 Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
- 3.W.6 With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.
- 3.W.7 Conduct short research projects that build knowledge about a topic.
- 3.W.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
- 3.SL.2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- 3.SL.5 Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.

Grade 4

- 4.RI.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.
- 4.W.6 With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.
- 4.W.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.

- 4.W.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.
- 4.SL.2 Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- 4.SL.5 Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.

Grade 5

- 5.RI.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
- 5.RI.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.
- 5.RI.7 Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).
- 5.W.6 With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.
- 5.W.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.
- 5.W.8 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.
- 5.SL.2 Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

- 5.SL.5 Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

Grade 6

- 6.RI.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
- 6.RI.7 Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they "see" and "hear" when reading the text to what they perceive when they listen or watch.
- 6.W.6 Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.
- 6.W.7 Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
- 6.W.8 Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.
- 6.SL.2 Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.
- 6.SL.5 Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.

Grade 7

- 7.RI.7 Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).
- 7.RI.7 Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film).
- 7.W.6 Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.
- 7.W.7 Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.
- 7.W.8 Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
- 7.SL.2 Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.
- 7.SL.5 Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

Grade 8

8.RI.7 Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.

8.RI.7 Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors.

8.W.6 Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.

8.W.7 Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

8.W.8 Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

8.SL.2 Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.

8.SL.5 Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.

What wheels help?



Do the NETS “wheels” help?

- Study and reflect
- refine your practice
- best practices
- pedagogy for 21st century engagement

Technology can impact...

- learning
- achievement
- engagement
- effort
- Creativity
- ???

Are you familiar with...

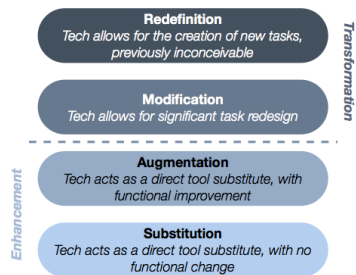
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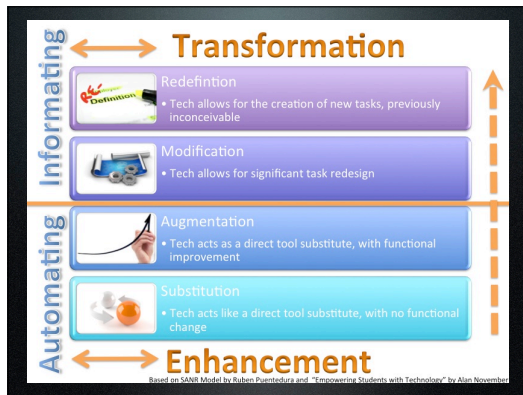
Reuben Puentadura



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SAMR (Puentadura)





1-Redefinition
Technology allows for the creation of new tasks, previously inconceivable.

2 Modification
Technology allows for significant task design.

3- Augmentation
Technology acts as a direct tool substitute, with functional improvements.

4- Substitution
technology acts as a direct tool substitute with no functional change.

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TRANSFORM
ENHANCE

ENHANCE

ENHANCE

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TRANSFORM ENHANCE

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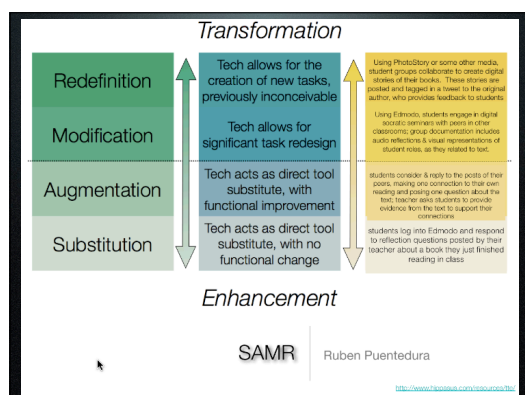
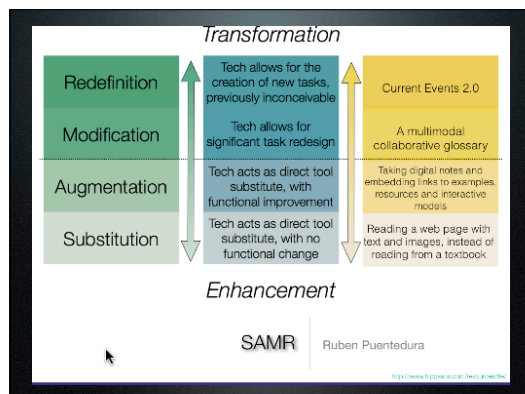
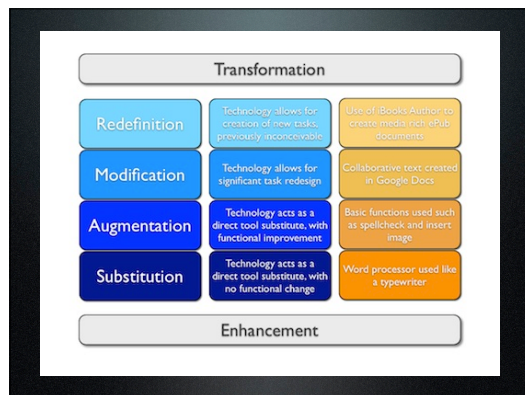
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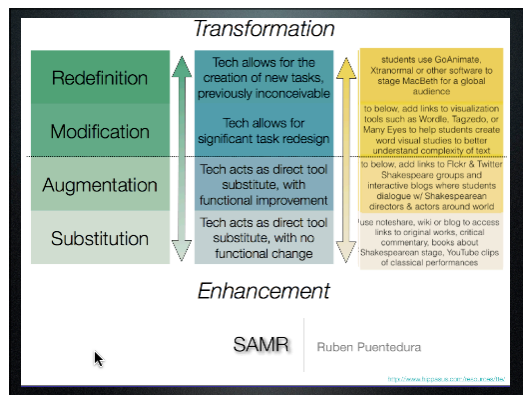
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The SAMR Ladder: Questions and Transitions

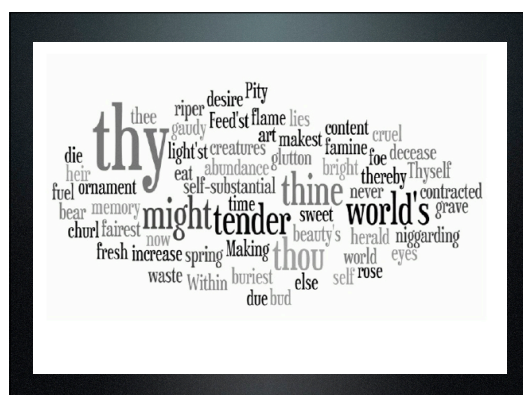
- **Substitution:**
 - What will I gain by replacing the older technology with the new technology?
- **Substitution to Augmentation:**
 - Have I added an improvement to the task process that could not be accomplished with the older technology at a fundamental level?
 - How does this feature contribute to my design?
- **Augmentation to Modification:**
 - How is the original task being modified?
 - Does this modification fundamentally depend upon the new technology?
 - How does this modification contribute to my design?
- **Modification to Redefinition:**
 - What is the new task?
 - Will any portion of the original task be retained?
 - How is the new task uniquely made possible by the new technology?
 - How does it contribute to my design?

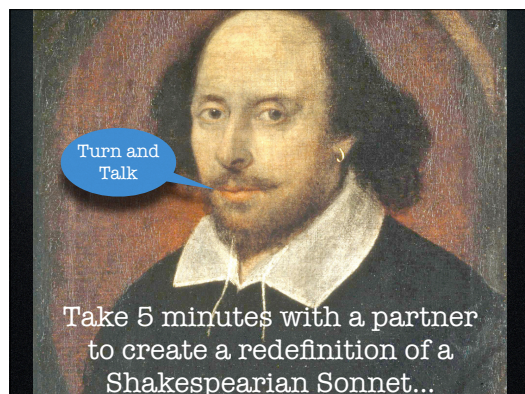
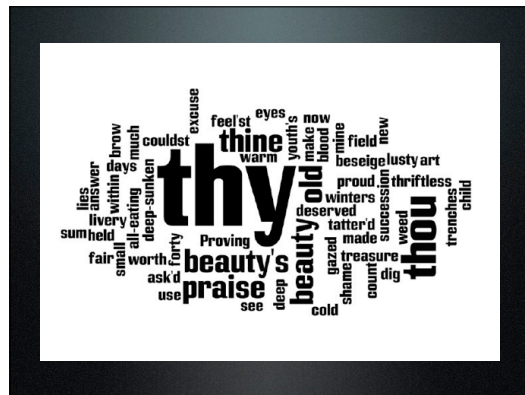




Let's look at these...

- Shakespeare's Sonnets Using Wordle





Transformation		
Redefinition	Tech allows for the creation of new tasks, previously inconceivable	
Modification	Tech allows for significant redesign	
Augmentation	Tech acts as direct tool substitute, with functional improvement	
Substitution	Tech acts as direct tool substitute, with no functional change	

Enhancement		