

## A Toolkit for Decision Making and Design: TPCK + SAMR

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Ruben R. Puentedura, Ph.D.

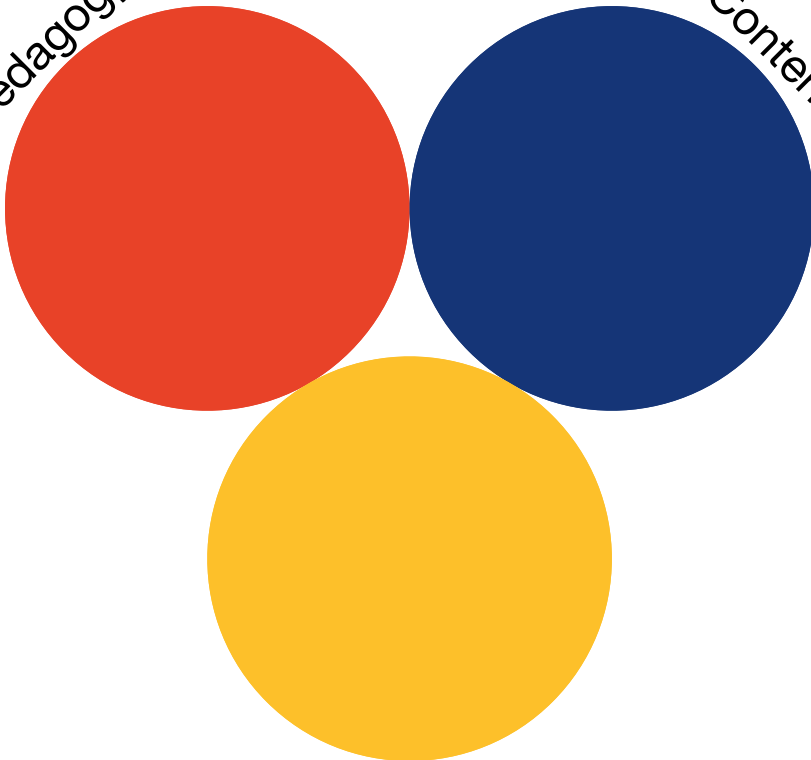


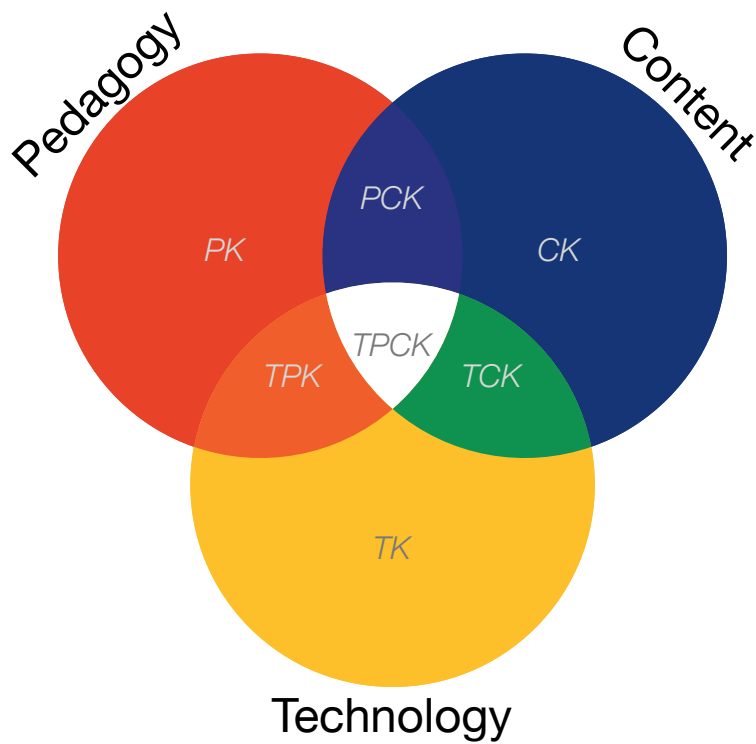
TPCK

Pedagogy

Content

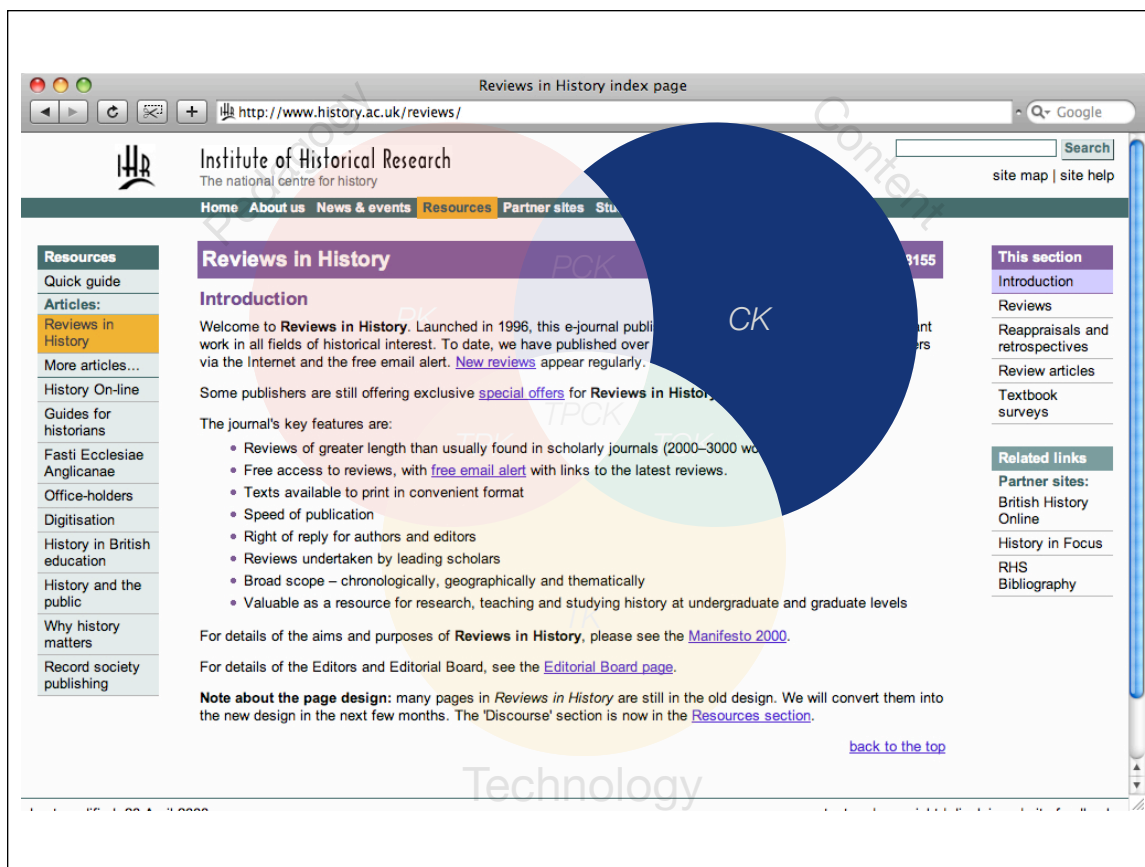
Technology





The screenshot shows the National Academies Press website with the following elements:

- Header:** "THE NATIONAL ACADEMIES" with the tagline "Advisers to the Nation on Science, Engineering, and Medicine". Navigation links include HOME, ABOUT NAP, and CONTACT NAP. A search bar and a "SEARCH" button are present.
- Left Sidebar:**
  - How People Learn:** A book cover for "How People Learn: Brain, Mind, Experience, and School" by Bransford, Brown, and Cocking.
  - Free Resources:** Includes a "PODCAST: How People Learn: Brain, Mind, Experience, and School" and a link to "Display this book on your site".
  - Related Titles:** Lists "Starting Out Right: A Guide to Promoting Children's Reading Success", "Preventing Reading Difficulties in Young Children", and "Other Related Titles".
- Main Content Area:**
  - Book Title:** "How People Learn: Brain, Mind, Experience, and School" (1999).
  - Editors:** John D. Bransford, Ann L. Brown, and Rodney R. Cocking.
  - Committee:** Committee on Developments in the Science of Learning.
  - Commission:** Commission on Behavioral and Social Sciences and Education.
  - Organization:** National Research Council.
  - Publisher:** NATIONAL ACADEMY PRESS, Washington, D.C., 1999.
- Right Sidebar:**
  - RESEARCH TOOLS:** Includes "Web Search Builder", "Skim This Chapter", and "Reference Finder".
  - TABLE OF CONTENTS:**
    - Front Matter (R1-R26)
    - 1 Learning from Speculation to Science (1-16)
    - 2 How Experts Differ from Novices (17-38)
    - 3 Learning and Transfer (39-66)
    - 4 How Children Learn (67-101)
    - 5 Mind and Brain (102-116)
    - 6 The Design of Learning Environments (117-142)
    - 7 Effective Teaching: Examples in History, Mathematics, and Science (143-177)





7 Things You Should Know About... | EDUCAUSE

http://www.educause.edu/7495&bhcp=1

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EDUCAUSE Learning Initiative

ADVANCING LEARNING THROUGH IT INNOVATION

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Location: Home » EDUCAUSE Major Initiatives » ELI » ELI Resources » 7 Things You Should Know About Series

EDUCAUSE Learning Initiative

ELI Resources

7 Things You Should Know About Series

ELI Discovery Tools

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The EDUCAUSE Top Teaching and Learning Challenges 2009

## 7 Things You Should Know About...

The EDUCAUSE Learning Initiative's (ELI's) 7 Things You Should Know About... series provides concise information on emerging learning technologies and related practices. Each brief focuses on a single technology or practice and describes:

- What it is
- How it works
- Where it is going
- Why it matters to teaching and learning

Use ELI's 7 Things You Should Know About... series to:

- Enhance your understanding of emerging technologies and their implications for your institution
- Open a dialogue with colleagues about new learning technologies
- Stay up-to-date on emerging technologies and related practices that have demonstrated or may demonstrate potential to enhance learning

7 Things You Should Know About... series provides concise information on emerging learning technologies and related practices. Each brief focuses on a single technology or practice and describes:

2008 2007 2006

### Geolocation, August 2008

Geolocation, also called geotagging, is the practice of associating a digital resource with a physical location. A photographer might include the longitude and latitude coordinates for where a picture was taken, allowing others to pinpoint that location on a map.

Effective Practices | The Sloan Consortium

http://www.sloanconsortium.org/effective/index.asp

Search

SLOAN-C

A Consortium of Institutions and Organizations Committed to Quality Online Education

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## Effective Practices

by Sloan-C

Welcome to the Sloan-C Effective Practices site. To help make quality online education accessible and affordable for anyone, anywhere, at any time, the Sloan-C community shares techniques, strategies, and practices in online education that have worked for them. These practices are peer reviewed to both insure quality and provide some documentation for tenure and promotion files.

There are several ways to search for effective practices:

**Search by Pillar** allows you to search by the five pillars of the building blocks of quality online education – learning effectiveness, scale, access, faculty satisfaction, and student satisfaction – and/or subcategories within them.

**Search by Context** allows you to search by your perspectives (roles) in online learning, organizational type, or subject area domain, as well as by special cases of online learning (such as online collaboration, or large class size), and/or by subcategories within these.

**Search by Technology** allows you to search by particular technology categories – audio, video, synchronous, asynchronous, mobile, virtual, and digital resources within them.

**What's New** returns the most recent effective practices added to the site.

Every few months we will also feature a collection of effective practices that address a particular issue in online education,

**Call for next Collection: STUDENT-GENERATED CONTENT**

**SEARCH by PILLAR**  
Learning Effectiveness, Scale, Access, Faculty Satisfaction, Student Satisfaction

**SEARCH by CONTEXT**  
Perspectives, Organizational Type, Domain, Special Cases

**SEARCH by TECHNOLOGY**  
Audio, Video, Synchronous, Asynchronous, Mobile, Virtual, Digital

**ADD AN EFFECTIVE PRACTICE**

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- ONLINE University in China
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**Educational Technology**

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- Music (24)
- Others (48)
- Pattern Recognition (20)
- Political Networks (16)
- Social Networks (77)
- Transportation Networks (33)
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Latest Projects:

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THE GUIDE TO COMPUTING LITERATURE

Electromagnetism supercharged!: learning physics with digital simulation games

Full text Pdf (234 KB)

Source: International Conference on Learning Sciences  
Proceedings of the 6th international conference  
Santa Monica, California  
Pages: 513 - 520  
Year of Publication: 2004

Authors: Kurt Squire University of Wisconsin-Madison, Madison  
Mike Barnett Lynch School of Education, Boston College  
Jamillah M. Grant Lynch School of Education, Boston College  
Thomas Higginbotham Lynch School of Education, Boston College

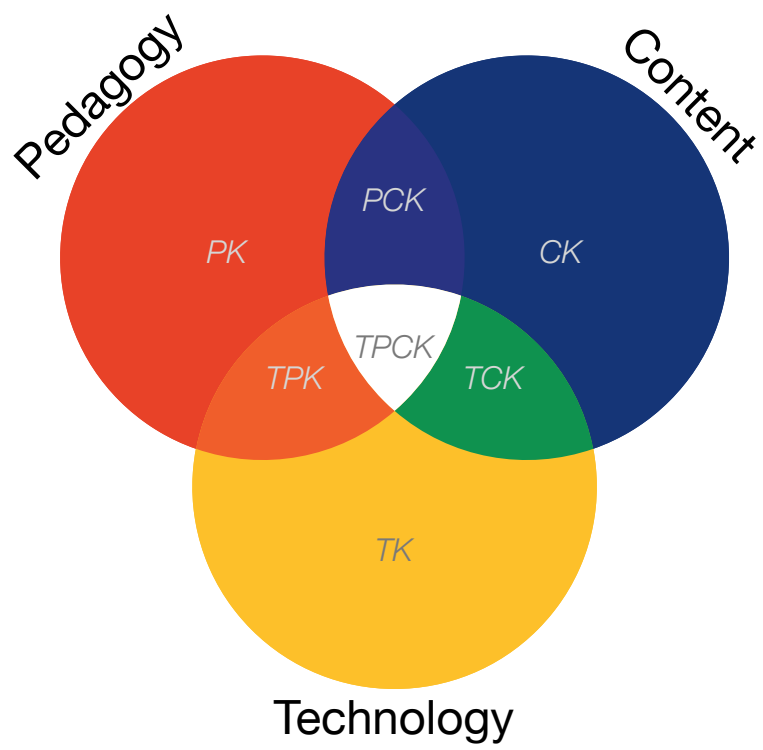
Sponsors: University of California, Los Angeles  
DIME: Center for Diversity in Mathematics Education  
CDI: Center for Digital Innovation  
UC ACCORD: University of California All Campus Consortium on research for Diversity  
CST: University of Southern California Center for Scholarly Technology  
CENS: Center for Environmental Networking systems  
CRESST: Center for Research on Evaluation, Standards, and Student Testing

Publisher: International Society of the Learning Sciences

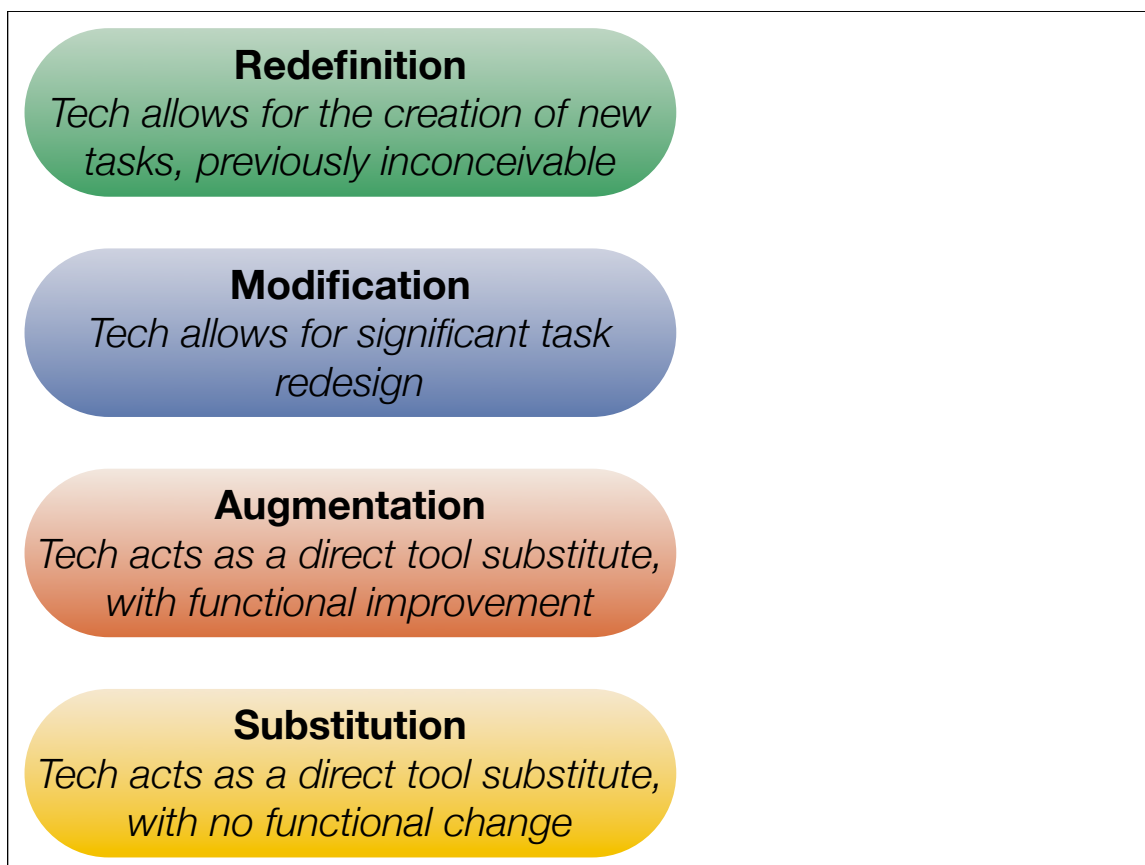
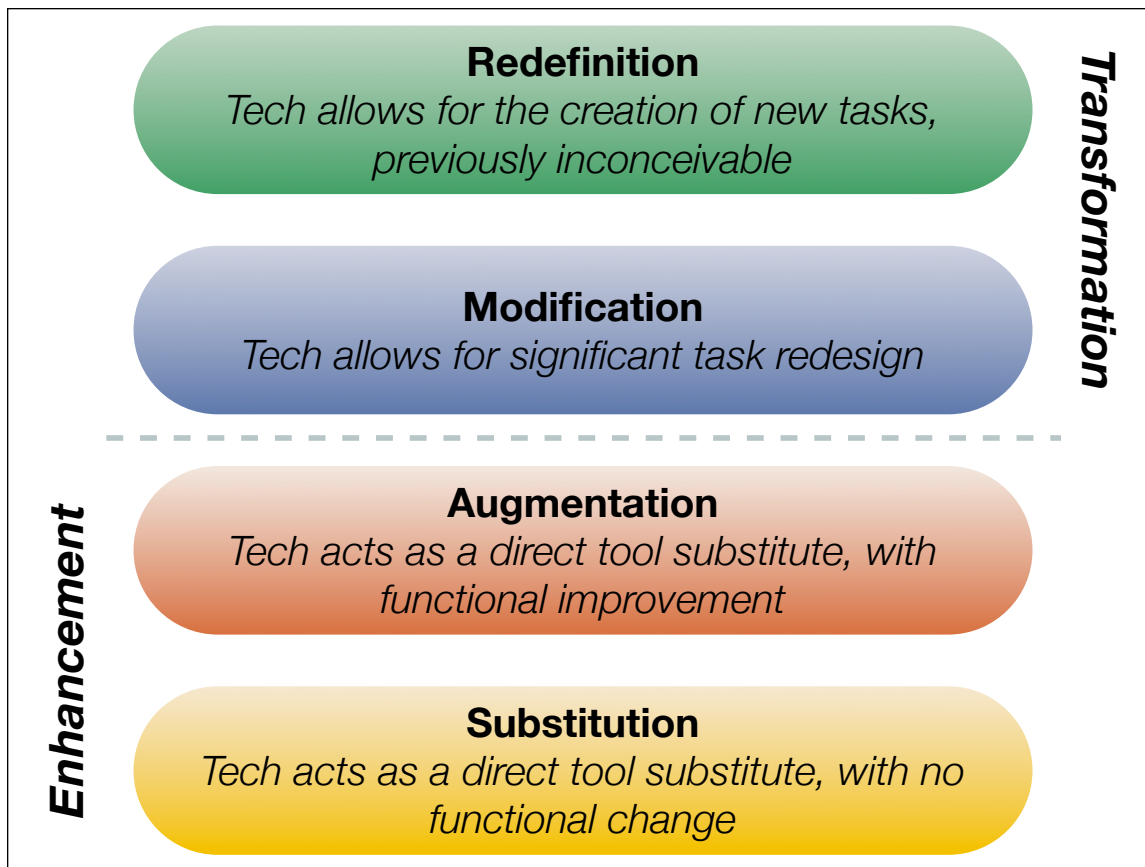
Bibliometrics Downloads (6 Weeks): 14, Downloads (12 Months): 147, Citation Count: 2

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SAMR



## Redefinition

*Tech allows for the creation of new tasks, previously inconceivable*

## Modification

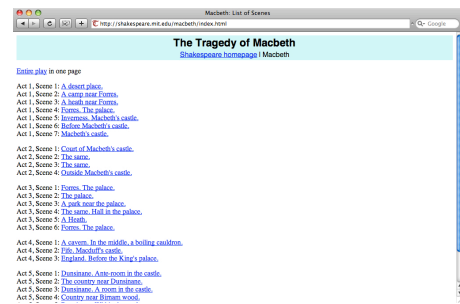
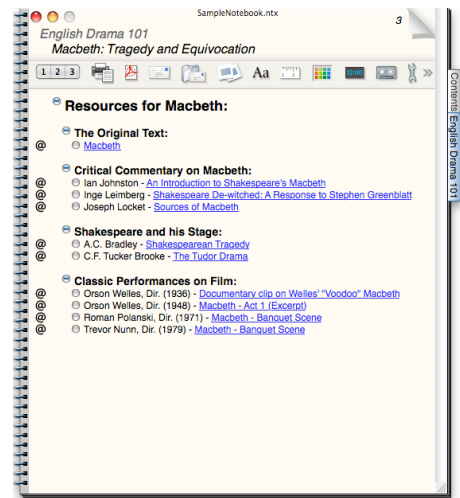
*Tech allows for significant task redesign*

## Augmentation

*Tech acts as a direct tool substitute, with functional improvement*

## Substitution

*Tech acts as a direct tool substitute, with no functional change*



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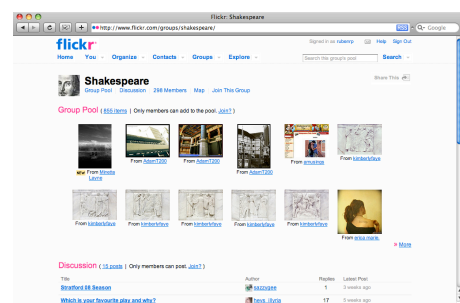
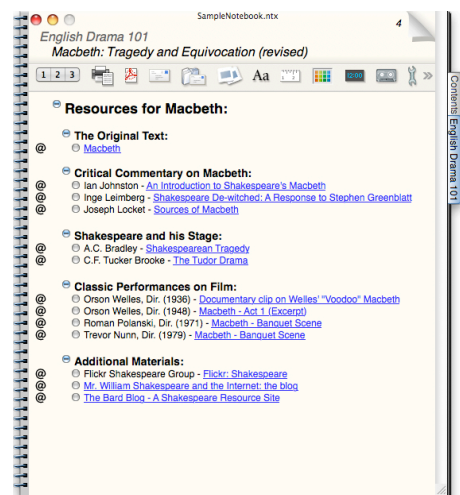
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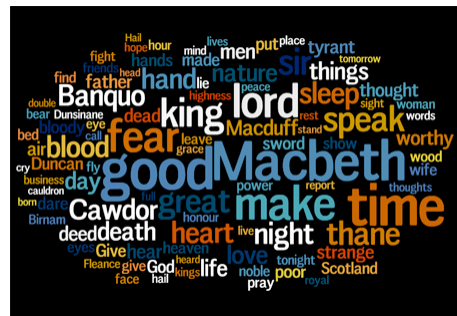
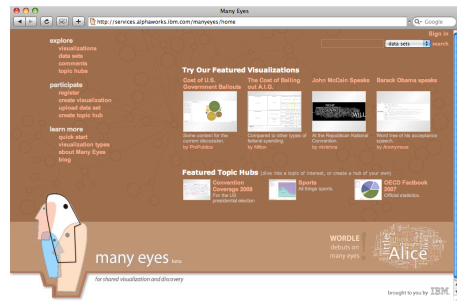
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### **Redefinition**

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Combining TPCK with SAMR

## TPCK - Substitution

MIT OpenCourseWare | Literature | 21L.003 Introduction to Fiction, Fall 2003 | Readings

http://ocw.mit.edu/OcwWeb/Literature/21L-003Fall2003/Readings/index.htm

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Calendar  
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Assignments  
Download Course Materials

### Readings

What does it mean to read a text closely and analyze it? Why do we do close reading in literary study? Professor Kelley has developed a guide for students that answers these questions and assists students as they read the course texts ([PDF](#)).

Below are the readings for the course by author, along with supplementary Web sites for each author. Many of the required readings may be downloaded from the [Project Gutenberg Web site](#). See the [calendar](#) for readings due each class session.

#### Jane Austen

**Required Readings**

Austen, Jane. *Northanger Abbey*. ([Download from Project Gutenberg](#))

**Supplementary Material**

[Jane Austen Society of North America](#)  
[The Republic of Pemberley](#) - A site on Austen and literary influences. A number of links.  
[Literary Allusions in Austen](#)  
[Voice of the Shuttle Gothic Literature page](#)  
[The Northanger Canon](#) - Isabelle Thorpe's "horrid" novels and others.

#### Mary Shelley

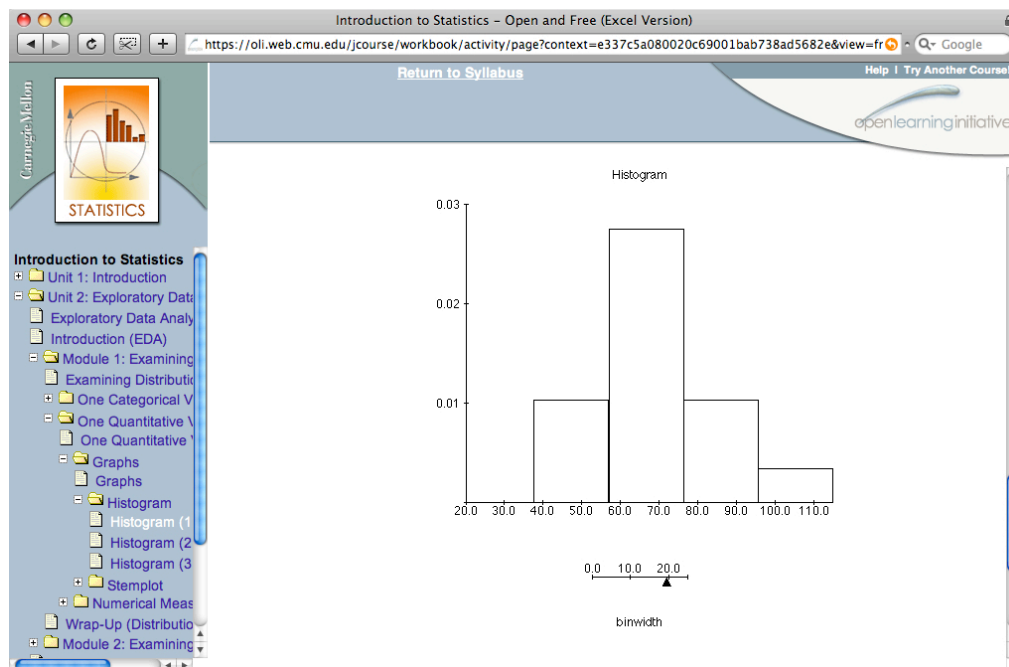
**Required Readings**

Shelley, Mary. *Frankenstein*. ([Download from Project Gutenberg](#))

**Supplementary Material**

[EText of Frankenstein](#) - A link to electronic texts of Shelley's *Frankenstein*.  
[Romantic Circles Shelley site](#) - Links to chronologies, e-texts.

## TPCK - Augmentation





## TPCK - Modification


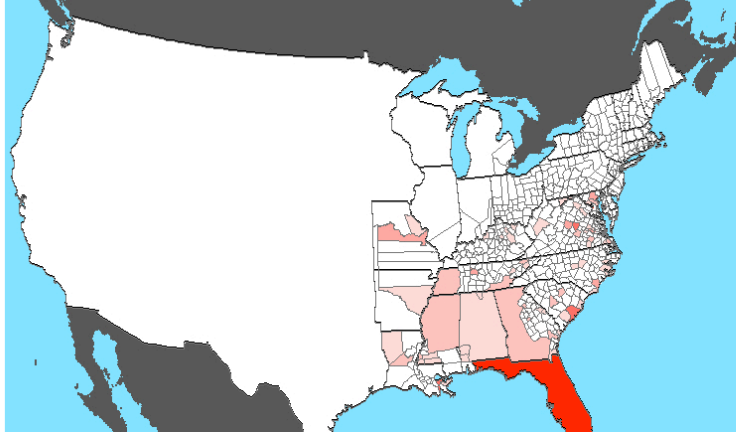
http://orion.lib.virginia.edu/cgi-bin/mapserv\_start?layer=TOTAL&header=&imgxy=370+255&zoomsize=2&zoomdir=0

### Southern History Database

HOW TO USE THE SHD | SUBMIT ENTRIES | SEARCH THE SHD | EXPLORE THE MAPS

Go to year: [1810](#) | [1820](#) | [1830](#) | [1840](#) | [1850](#) | [1860](#) | [1870](#) | [1880](#) | [1890](#)

#### 1810 All Keywords



1810 All Keywords

☐ Rivers ☐ River Labels  
☐ Cities ☐ County Labels  
☐ State Labels

Refresh

**Tools**

Use the "i" tool to query entries.

**Number of Events**

☐ 0  
☐ 1 - 2  
☐ 3 - 4  
☐ 5 - 6

## TPCK - Redefinition

El Señor Presidente - Wikipedia, the free encyclopedia

http://en.wikipedia.org/wiki/El\_Señor\_Presidente

Ten things you may not know about Wikipedia.

[article](#) | [discussion](#) | [edit this page](#) | [history](#)

### El Señor Presidente

From Wikipedia, the free encyclopedia

***El Señor Presidente* (*The President*)** is a 1946 novel written in Spanish by Nobel Prize-winning Guatemalan writer and diplomat **Miguel Ángel Asturias** (1899 – 1974). A landmark text in **Latin American literature**, *El Señor Presidente* explores the nature of political **dictatorship** and its effects on society. Asturias makes early use of a literary technique now known as **magic realism**. One of the most notable works of the **dictator novel** genre, *El Señor Presidente* developed from an earlier Asturias short story, written to protest social injustice in the aftermath of a devastating earthquake in the author's home town.

Although *El Señor Presidente* does not explicitly identify its setting as early twentieth-century Guatemala, the novel's title character was inspired by the 1898–1920 presidency of **Manuel Estrada Cabrera**. Asturias began writing the novel in the 1920s and finished it in 1933, but the strict censorship policies of Guatemalan dictatorial governments delayed its publication for thirteen years.

The character of the President rarely appears in the story but Asturias creates a number of other characters to show the terrible effects of living under a dictatorship. His use of dream imagery, **onomatopoeia**, **simile**, and repetition of particular phrases, combined with a discontinuous structure, which consists of abrupt changes of style and viewpoint, springs from **surrealist** and **ultraist** influences. The style of *El Señor Presidente* influenced a generation of Latin American authors. The themes of Asturias's novel, such as the inability to tell reality apart from dreams, the power of the written word in the hands of authorities, and the alienation produced by tyranny, center around the experience of living under a dictatorship.

On its eventual publication in Mexico in 1946, *El Señor Presidente* quickly met with critical acclaim. In 1967, Asturias received the **Nobel Prize in Literature** for his entire body of work. This international acknowledgment was celebrated throughout **Latin America**, where it was seen as a recognition of the region's literature as a whole. Since then, *El Señor Presidente* has been adapted for the screen and theater.

**Contents** [hide]

#### *El Señor Presidente*

By Miguel Ángel Asturias  
Translated by Frances Partridge  
First published by Macmillan Press, 1946



The cover of the English translation, from Macmillan Press.

<b>Author</b>	Miguel Ángel Asturias
<b>Translator</b>	Frances Partridge
<b>Country</b>	Mexico
<b>Language</b>	Spanish
<b>Genre(s)</b>	Dictator novel
<b>Publisher</b>	Costa-Amic
<b>Publication date</b>	1946
<b>Published in</b>	1963
<b>English</b>	

## Some Guiding Questions

### Guiding Questions - TK

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- Are the technology tools being used suitable for working on all levels of the SAMR model, or are they constrained in this regard?
- Is the use being made of the technology at the S/A, or M/R levels of the model?
- Are the technology tools well-suited to the task at hand, or are there other choices that would either fit the task better, or allow for greater flexibility in exploring all levels of the SAMR model?

## Guiding Questions - TPCK

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- Is the activity as described essentially analogous to a traditional learning activity (S/A), or does it present substantial transformations from it (M/R)?
- Is the activity essentially limited to itself in potential scope, or does it open paths for other future activities to build upon it?
- How could the activity accommodate modification or addition (including tool choice and use) in order to take the overall result to the next SAMR level?

Resources Cited

- **The TPCK Model:**

- *TPCK - Technological Pedagogical Content Knowledge*  
[http://www.tpck.org/tpck/index.php?title=Main\\_Page](http://www.tpck.org/tpck/index.php?title=Main_Page)
- AACTE (Eds.) *The Handbook of Technological Pedagogical Content Knowledge for Educators*. New York:Routledge, 2008.

- **The SAMR Model:**

- Ruben R. Puentedura. *Transformation, Technology, and Education*. (2006) Online at:  
<http://hippasus.com/resources/tte/>

- **PK Example:**

- John D. Bransford, Ann L. Brown, and Rodney R. Cocking (Eds.) *How People Learn: Brain, Mind, Experience, and School*. (1999)  
Online at:  
[http://www.nap.edu/openbook.php?record\\_id=6160](http://www.nap.edu/openbook.php?record_id=6160)

- **CK Example:**

- *Institute of Historical Research - Reviews in History*  
<http://www.history.ac.uk/reviews/>

- **PCK Example:**

- *Center for Applied Linguistics - CALdigests*  
<http://www.cal.org/resources/digest/index.html>

- **TK Example:**

- *EDUCAUSE Learning Initiative - 7 Things You Should Know About...*

<http://www.educause.edu/7495&bhcp=1>

- **TPK Example:**

- *The Sloan Consortium - Effective Practices*

<http://www.sloanconsortium.org/effective/index.asp>

- **TCK Example:**

- *VisualComplexity*

<http://www.visualcomplexity.com/vc/>

- **TPCK Example:**

- Kurt Squire, Mike Barnett, Jamillah M. Grant, and Thomas Higginbotham. *Electromagnetism supercharged!: learning physics with digital simulation games*. (2004) Online at:

<http://portal.acm.org/citation.cfm?id=1149126.1149189>

- **SAMR Examples:**

- *The Tragedy of Macbeth (text hosted at MIT)*

<http://shakespeare.mit.edu/macbeth/index.html>

- *Flickr Shakespeare Group*

<http://www.flickr.com/groups/shakespeare/>

- *Many Eyes*

<http://services.alphaworks.ibm.com/manyeyes/home>

- *UpStage*

[http://upstage.org.nz/blog/?page\\_id=2](http://upstage.org.nz/blog/?page_id=2)

- *Macbeth in Second Life*

<http://www.youtube.com/watch?v=ciclpd1Xp3A>

• **TPCK+SAMR Examples:**

- Prof. Wyn Kelley: *MIT OpenCourseWare - 21L.003 Introduction to Fiction*  
<http://ocw.mit.edu/OcwWeb/Literature/21L-003Fall2003/CourseHome/index.htm>
- Prof. Oded Meyer: *Carnegie Mellon Open Learning Initiative - Introduction to Statistics*  
<https://oli.web.cmu.edu/jcourse/webui/guest/look.do?section=stats-excel>
- Prof. Edward L. Ayers: *Virginia Center for Digital History at the University of Virginia - The Rise and Fall of the Slave South*  
<http://www.vcdh.virginia.edu/HIUS323/>
- Prof. Jon Beasley-Murray: *University of British Columbia - Murder, Madness, and Mayhem: Latin American Literature in Translation*  
[http://en.wikipedia.org/wiki/Wikipedia:WikiProject\\_Murder\\_Madness\\_and\\_Mayhem](http://en.wikipedia.org/wiki/Wikipedia:WikiProject_Murder_Madness_and_Mayhem)

Hippasus

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<http://hippasus.com>  
[rubenrp@hippasus.com](mailto:rubenrp@hippasus.com)

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