Innovation vs. Invention

Shelee King George
Program Manager
skgeorge@PSCTLT.org

In this session, participants will explore:
- Change
- Tomorrow’s workforce
- Innovation vs. invention
- Technology in the classroom
- REAL learning tasks
- Wows and Wonders Gallery Walk

Beyond today? Take action on at least two ideas to promote innovation in the classroom.
1. Innovation vs. invention: Knowing the difference makes a difference

http://wistechnology.com/articles/4184/

Consonant with the etymological origin of the word, “innovation” implies the creation of something new. In this regard, innovation is often equated with invention. However, the two definitions - innovation and invention - have been evolving. Only recently has an appreciation for the difference, and the need to regard them differently, emerged. As Jan Fagerberg wrote in his 2004 article:

“An important distinction is normally made between invention and innovation. Invention is the first occurrence of an idea for a new product or process while innovation is the first attempt to carry it out into practice.”

One example is the iPod, which as a standalone product is really not very inventive. MP3 players had been around for several years before the iPod. While there may be unique hardware and software aspects to the device, the fundamental invention of having a handheld MP3 player was not at all new.

What made the iPod truly innovative was its combination of aesthetic design, elegant ergonomics, and ease of use. Also, there was the creation of the iTunes software and website that enabled listeners to actually use their fancy iPod. It is the combination of all these elements that made the iPod truly innovative to practice.”

2. Conceptualizing innovation

From Wikipedia, the free encyclopedia http://en.wikipedia.org/wiki/Innovation

Innovation has been studied in a variety of contexts, including in relation to technology, commerce, social systems, economic development, and policy construction. There are, therefore, naturally a wide range of approaches to conceptualizing innovation in the scholarly literature. See, e.g., Fagerberg et al. (2004).

Fortunately, however, a consistent theme may be identified: innovation is typically understood as the successful introduction of something new and useful, for example introducing new methods, techniques, or practices or new or altered products and services.

3. Distinguishing from Invention and other concepts

From Wikipedia, the free encyclopedia http://en.wikipedia.org/wiki/Innovation

"An important distinction is normally made between invention and innovation. Invention is the first occurrence of an idea for a new product or process, while innovation is the first attempt to carry it out into practice" (Fagerberg, 2004: 4)

Innovation occurs when someone uses an invention or an idea to change how the world works, how people organize themselves, or how they conduct their lives. In this view innovation occurs whether or not the act of innovating succeeds in generating value for its champions. Innovation
is distinct from improvement in that it permeates society and can cause reorganization. It is distinct from problem solving and may cause problems. Thus, in this view, innovation occurs whether it has positive or negative results.

4. An Excerpt from a college President’s Speech to the class of 2009
June 2009, Western Washington University, Bellingham, Washington:

With the challenging economy and job prospects tougher for this graduating class, I encourage you to serve and to cultivate. You will streamline, simplify and do more with less.

Innovation is your key. You will take existing ideas to new levels or take new ideas and transform them into action. Innovation is not about simply being a new idea; it is what you do with it. It is taking action on ideas.
Never Was About Technology? - Time to Focus on Learning?


As I am attempting to grasp the magnitude of how to be/become/ grow into a piece of the puzzle that helps start (?)/develop and eventually complete a shift of our schools to better prepare and help students learn “TODAY”. (P.S. I am getting a little tired of the “21st century” label, since we are almost 10 years into that new century...),

I wonder... What makes the difference? Does Technology (Integration) really make the difference?

Don’t misunderstand... technology tools play a huge role ...but...are they the deciding factor of making a difference? I remembered a quote of Conor Bolton :

“poor teaching + technology = expensive poor teaching”

While I was completing my Masters Degree in Instructional Technology, I was convinced that by helping teachers integrate technology into their lessons (doing the same thing...just with technology) would make the difference.

While I was a Technology Integration Facilitator, I was convinced that by co-teaching with classroom teachers, we would give students the opportunity to work with different media to extract/ share information and express themselves while not adding to the teacher work load of doing “one more thing”. We used technology tools to engage students and activate THEIR way of thinking and learning while teaching the CURRENT curriculum and that would make the difference.

Now, I have arrived at a point in the process where I believe that it is not (never was) about technology. To make a difference, it has always been about good teaching, reflecting and focusing on (relevant?) student learning.

Ask yourself what happens to student learning when:

- a teacher does not have a (teaching) plan that they are able/required to follow?
- the “plan” is outdated/has been used for the last 5 years?
- teachers (across grade levels and subject areas) teach in isolation of each other?
- teachers have forgotten, are not interested in, don’t have time for, or are not supported in their own learning?
- collaboration and communication among administrators and teachers in order to pursue the common goal called student learning is out of sync or non existent?
- teaching means covering lessons, units, objectives and standards and does not involve teaching for understanding?

How (in what capacity/role) can we best make a difference in helping students learn?

http://langwitches.org/blog/2009/06/17/never-was-about-technology-time-to-focus-on-learning/
# Learning Activity Checklist

## Standards-Based Task

The task helps students:
- Gain/improve specific knowledge or skills in a content area (for example, district or state standards).
- Gain/improve 21st Century Skills (problem solving, communication, collaboration, information, and time and resource management).
- Practice the methods/processes of a discipline (for example, the scientific method).
- Understand how learning goals guide teaching and learning activities.
- Perceive how learning activities are aligned with assessments.
- Know the criteria and performance standards for teacher, peer, and self-evaluations of their products and performances.
- Demonstrate understanding and apply their knowledge and skill in a variety of ways.

## Engaging Task

Students:
- Are involved in active learning (hands-on, building, making, moving, using “multiple intelligences,” etc.).
- Find the topic fascinating, fun, or passion-arousing.
- Are given choices (topic, approach, etc.).
- Are challenged (but not overwhelmed).
- Create a product/performance or gain competencies that have value to them outside of school.
- Know their product/performance will be appreciated, used by, or useful to others outside the classroom.
- Receive real-world feedback on the quality of their work from an audience or subject-matter expert.
- Get to bring their experience outside the classroom to bear on their work.
- Are accountable to one another.

## Problem-Based Task

Students must exercise logical and creative thinking to:
- Form a reasoned judgment.
- Solve a problem.
- Make a decision or choice.
- Plan a course of action.
- Persuade or convince someone.
- Defend a position.
- Explain a concept.
- Interpret a complex situation.
- Resolve a perplexing or puzzling situation.
- Troubleshoot and improve a system.
- Meet someone’s genuine need.
- Plan and stage an event.
- Apply a course concept in a real-world situation.
- Invent a problem-solving process.
- Work within constraints (for example, restrictions on size, budget, time, resources, etc.).

## Technology Enhances Academic Achievement

Technology is used to:
- Give students access to quality information, primary documents, or points of view not available otherwise.
- Allow students to investigate a concept in ways infeasible otherwise (for example, human/animal anatomy).
- Differentiate learning for students with different needs.
- Help students understand abstract concepts.
- Enable students to participate in online scientific investigations.
- Help students with the problem-solving process (e.g., using graphic organizers).
- Foster student discovery of concept or construction of their own understanding of a concept.
- Share ideas and communicate with remote groups.
- Help students receive feedback on their work from a community outside the classroom.
- Enable students to participate in the democratic process.

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WHAT DO YOU REALLY THINK? REAL TASK OR NOT?

Which of these described tasks would be examples of a REAL task - a REAL situational problem, a REAL would-be audience, and a REAL product?

Presidential Campaign:
Welcome to the world of politics! You and your team mates have just been hired as the campaign team responsible for the re-election of your country’s president who has served prior to 1965 (chosen by random draw during class). As the campaign team, you must reflect your president in the best possible light. Research your president; discover their major contribution to world history and society as a whole during their reign in office. Determine your advertising campaign and be prepared to present your campaign speech to the voting public (your peers) at the upcoming Class Primary Election where ballots will be cast. Will your candidate make it to the Final Election?

World Leaders:
Your teacher will give you a World Leader to research. Prepare a 4-5 page profile of your leader highlighting their life and contributions to World History. Include a bibliography. You will use resources in the library, your text book and Internet or electronic resources. As you research, take notes for your essay and record the details you will need for your bibliography. You must have 4 different sources cited in your bibliography.

What Are They Really Selling?
Our world is filled with advertising. Are they swaying your opinions? Review the Adbusters Web site and complete the worksheet activities designed to help you critique ads and understand the psychological needs advertisers claim their products fulfill (survival, love/belonging, fun, freedom, self-worth, power, etc.). Bring one example of a print ad that addresses one of these psychological needs to share during class on Wednesday.

Global Top 10
Choose a decade in World History studied this year. Create a timeline that lists the Top 10 events that you feel are the most significant in that decade. You will use resources in the library, your textbook, Internet sites and any other outside sources you can find. Cite your sources using the standard MLA format on the back of your timeline.

The Way I See it:
Starbucks values their customer comments and have posted their ideas, views and comments on the back of their coffee cups. Will your comments be included in the next production of cups? Look through your bi-weekly writing prompts from this quarter and select three quotes you feel encourage thought and reflection. Be prepared to meet in your Writer’s Conference Team to use the Writers’ Protocol to share your selections. As a result, each team will submit three quotes on the Starbucks’ Way I See It Web site for consideration.

Hidden Faces
As an Art Exploration student, you have dabbled with many different mediums during the semester. As a final project, choose the medium of YOUR choice to create and display a mask that represents your personality, your dreams or your passion. Your mask will become a part of the Hidden Faces Gallery available for public viewing in the local Tourism Department’s Visitor Center. Create an artist statement which explains your work to post next to your work of art.

Country Report
Create a 10 page report on a country selected from the regions we have studied this year. Include 5 sources in your bibliography, note cards, and information about population, geography, history, people and culture, and economic activity. Include 4 maps in addition to the report. The report must be typed in size 12 font, using standard margins.
Workings in groups of 3-4, rewrite one of the existing traditional tasks to make it “REAL”. Write as if you are speaking to students. Remember, a REAL task will have a REAL problem, a REAL product and a REAL audience. Choose a recorder who is willing to write legibly on this template.

Title: ___________________________________________  Authors: ________________________________________________

We believe our task is now REAL because:

Problem to be solved - ________________________________________________________________________________

Product to be created - _________________________________________________________________________________

Audience to share with - ________________________________________________________________________________
**Head - Heart - Foot:** As you reflect on this session, think how it has touched your head with a new idea, your heart with a feeling, and your foot to take action on a new idea you gained today or to go forth with an existing one.