CONNECT!ONS Med!aLit moments

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## In This Issue…

## Theme: Media Literacy and Systems Thinking

Many commentators have observed the links between media literacy, digital literacy, and the 21st century skills movement. Is the CML framework really representative of the larger ideas that characterize this movement? A reader with a jaundiced eye might view our efforts to promote the framework as merely the promotion of a product. But the Center is not alone in advocating for the use of thinking tools that can help students gain a wider perspective on topics under study and conduct fine-grained analysis as well. For nearly 20 years, the Waters Foundation has advocated for the use of systems thinking tools in education which students can use to analyze complex relationships, solve problems, and make well-considered decisions.

In other words, CML, the Waters Foundation, the Partnership for 21st Century Skills and other organizations have all been calling for the use of critical thinking skills *and* tools in the classroom which will enable students to integrate what they learn across disciplines, and to apply that knowledge to their own lived experience. Systems thinking isn't limited to a single educational 'brand,' but is part of a host of strategies intended to revolutionize the way we think, learn, and teach in the 21st century.

In this issue of *Connections,* we demonstrate how media literacy and systems thinking provide a framework for interdisciplinary inquiry, as well as tools for empowerment, and you'll learn how to apply one of the systems thinking tools in your teaching practice. We provide even more information on the Waters Foundation and systems thinking in our resources section. In addition, you'll find a review of an article by education pioneer Grant Wiggins on re-building schools to meet students' individual needs, and an overview of new media literacy requirements for teaching credential candidates at UCLA and Appalachian State University. And in this month's MediaLit Moment, your students will learn how to use a simple systems thinking tool to understand their relationships with advertisers and media producers.

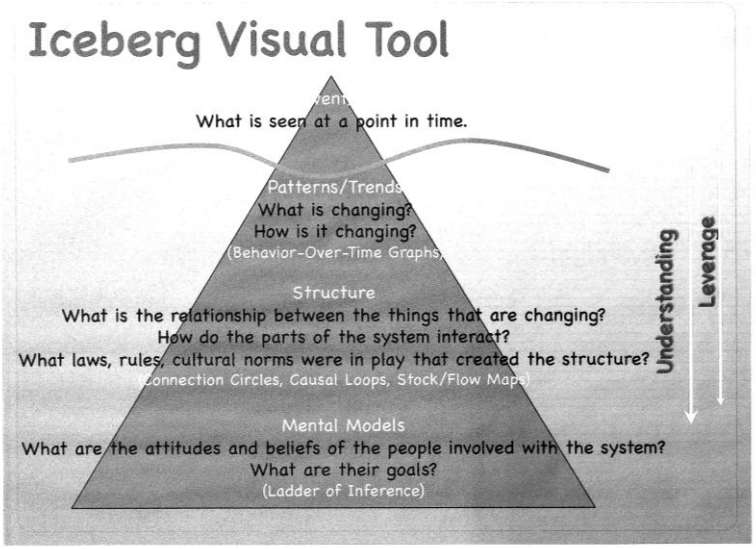
# Research Highlights

## Systems Thinking in Schools

What is systems thinking? It may be best defined as a practice. As with training in the use of the CML framework, the intellectual aim of systems thinking instruction is to develop patterns—habits—of thinking among students. The Waters Foundation has identified 12 habits of system thinkers. Some include: Changes perspectives to increase understanding, Identifies the circular nature of complex cause and effect relationships, Finds where unintended consequences of actions emerge (visit our resources section for more).

Just as the CML framework provides a shared vocabulary of concepts and practices, the habits of system thinkers are supported by concepts, vocabulary and practice with visual tools. Systems are described in terms such as reinforcing and balancing processes, and patterns of behavior over time. Students use tools such as causal loop diagrams to better understand the kinds of processes involved in cause-and-effect relationships, and behavior-over-time graphs to identify patterns of events and grasp their significance.

One systems thinking tool which can be applied in a wide variety of educational contexts is the iceberg model. As students use this model, they can more deeply appreciate the many, inter-related, and often 'hidden' causes that lead to events they observe—the tip of the iceberg. [To access this slide, and others from Tim Taber's presentation at the Northwest Systems Thinking in Schools Institute click here]




The iceberg diagram is exceptionally well-suited for use in media literacy instruction. Students usually consume the final media product, and it's the media literacy educator's task to help them understand what went "into" the production of the text. The Waters Foundation's definition of mental models (the most important causal factors listed at the base of the diagram) is also illuminating: "Mental models are deeply ingrained assumptions,

generalizations, or even pictures or images that influence how we understand the world and how we take action." This definition aptly describes the influence of media on society.

Systems thinking is also used for problem solving in a variety of disciplines. For example, the teacher of an Environmental Systems class in Vermont decided to give students a real-world challenge for their final exam: "There is an unconfirmed case of smallpox in Chittenden County. You are the Emergency Response Team for the State of Vermont. Good luck." Students had already learned to use behavior-over-time graphs to describe the typical spread of diseases in an animal population. To increase the challenge, the teacher provided a mock CDC update on the spread of the disease every two hours. At the end of 26 hours, they had projected the likely spread of the disease if unchecked, and the best actions to take towards containment (Mahony, A Final Exam Like No Other, Waters Fdn website; to view, click Resources, Materials, Articles on web).

Few quantitative studies on the effectiveness of systems thinking instruction have been published, but teachers have been building a body of action research over the last five years. With action research, teachers determine and refine a research question related to how systems thinking strategies might affect student fulfillment of curricular goals. The question provides a focus for them as they describe desired student learning and draft a plan for assessing progress towards that goal. Teachers then collect and analyze data on student performance before and after the use of particular systems thinking strategies. Findings of the research include:

- When students use systems thinking concepts and tools, teachers have noted an increased number of incidences of transfer from classroom lessons to students' real-life experiences
- Many students show increased motivation, engagement and self-esteem. For example, when asked to "tell the story of a line," or "tell the story of a loop," many usually reluctant students were willing to use visual diagrams to present their ideas or theories.
- Systems thinking concepts and tools help students understand their own beliefs/mental models and behaviors. For example, students use behavior-over-time graphs for self-assessing how behaviors and emotions change over time.

These findings show how individual students have exhibited greater self-efficacy as a result of using systems thinking tools. And this is not an accidental development. Student empowerment is the end goal for which the systems thinking tools were designed. Of the 12 habits of a systems thinker, 4 are used to develop students' awareness, 4 to increase their understanding, and 4 to help them plan and take action. One of the final 4 habits is: Using understanding of system structures to identify possible leverage actions. Essentially, the way in which the 12 habits are structured mirror the CML Empowerment Spiral of Awareness,

Analysis, Reflection, and Action.

At CML, we say that media literacy empowers students to make wise choices. Systems thinking helps learners arrive at a complete picture of what those choices are. According to the Waters Foundation: “People who practice systems thinking often report that it sharpens and clarifies their entire worldview. Confusing, disconnected snapshots of life start to make more sense when understood as patterns of change over time. . . .Many of us have some sense that everything is connected to everything else. Systems thinking provides tools to better understand and communicate these connections.”

## CML News

Coming soon…

**Voices of Media Literacy**

CML President and CEO Tessa Jolls, Barbara Walkosz, and Dee Morganthaler will serve on a panel to introduce the Voices of Media Literacy project at the NAMLE conference July 23-25, 2011.

*Voices of Media Literacy* was initiated by Jolls and Walkosz to document the evolution of the media literacy field and to get a current snapshot of the perspectives of these experienced innovators and leaders. Transcripts will be available on the CML website following the conference (www.medialit.com).

CONSORTIUM for MEDIA LITERACY

*Uniting for Development*

**About us…**

The Consortium for Media Literacy addresses the role of global media through the advocacy, research and design of media literacy education for youth, educators and parents.

The Consortium focuses on K-12 grade youth and their parents and communities. The research efforts include nutrition and health education, body image/sexuality, safety and responsibility in media by consumers and creators of products.

The Consortium is building a body of research, interventions and communication that demonstrate scientifically that media literacy is an effective intervention strategy in addressing critical issues for youth.
www.consortiumformedialiteracy.org

# Resources for Media Literacy

## Grant Wiggins' Vision for Re-Structuring the Curriculum

What would the high school curriculum 'look like' if it were explicitly structured to meet students' personal, social and functional needs? Grant Wiggins, who has worked on many of the most influential educational reform movements in the last twenty five years, including Theodore Sizer's Coalition of Essential Schools, the International Baccalaureate Program, and the Advanced Placement Program, gives us his vision of this curriculum in an article in the March issue of ASCD's *Educational Leadership*.

Wiggins grounds his article with a discussion of a historical debate over the purposes of education which emerged in the late 19th and early 20th centuries. In 1892, the Committee of Ten was convened and chaired by the president of Harvard University. Organized in subject-area groups and staffed by professors and teachers in those subjects, the committee argued that a college-prep education, including multiple years of Latin and Greek, was appropriate for all students. In 1915, the National Education Association appointed a Commission on the Reorganization of Secondary Education. In 1918, the commission concluded that the mission of education was to enable the student ". . . to shape both himself and society towards ever nobler ends." (quoted p.29), and proposed seven main objectives (or "cardinal principles") by which any high school curriculum—and especially the curriculum of the traditional academic disciplines—should be judged. The first of these was health, followed by command of fundamental processes (reading, writing, arithmetical computations, elements of oral and written expression). They also included vocation, citizenship, and ethical character.

Using the cardinal principles as a springboard, Wiggins argues that the developmental needs of students should be the primary building block of education, and wonders why ". . . we are on the verge of requiring every student in the United States to learn two years of algebra that they will likely never use, when no one is required to learn wellness or parenting" (30).

Wiggins asserts the continuing relevance of the cardinal principles in light of recent research on employer needs. According to this research, successful workers communicate effectively, orally and in writing; display accountability in the workplace; possess the social and behavioral skills needed for teamwork; are creative and techno-savvy; have a good command of basic statistics, and can apply relatively simple mathematics to real-world problems such as those concerning financial or health literacy.

Beyond this framework of basics, Wiggins proposes an education to suit the needs, talents and interests of individual students. In today's pluralistic and unpredictable world, students should not be required to pass the same collection of traditional courses to graduate. Instead, they should leave ". . .when they are judged to be ready for whatever next challenge they take on—whether it be college, trade school, the military, or playing in a band" (p.28).

Readers who recollect their past experience with high school education may become uneasy

at this point. Trade school and the military? Isn't this just another way of tracking students towards separate and unequal futures? Wiggins makes two arguments to dispel this anxiety. First, he argues that our existing academic curriculum, and the national organizations which seek to extend it, such as Common Core and Achieve, are narrowing our definition of education: "Gone are excellent vocational programs. . .Threatened are visual arts, theater, music and dance programs, despite their obvious value" (p.30). Second, he asks a simple question: "Can't vocational courses and courses in the arts be as demanding as upper-level courses in math and chemistry?" (p.33).

The philosophy of education which animates Wiggins' vision of the secondary school curriculum both reflect and complement the goals of media literacy education. Where Wiggins argues that health should be the main objective of education, media literacy education is intended to help students learn how to make wise choices, not only about media, but in all areas of their lives, including their health. Where Wiggins argues that students need a rigorous—rather than elementary—preparation in the skills that employers find valuable, media literacy educators help students gain complex critical thinking and problem-solving skills which can be applied in all arenas of their lives. Where Wiggins believes that schools should meet the needs of individual students, media literacy educators call attention to the engagement that students display when lesson content appeals to their interests. And where Wiggins seeks to dismantle a two-tier curriculum which privileges a select few disciplines, media literacy educators frequently advocate for the integration of media literacy across all subjects.

Perhaps the most interesting aspect of Wiggins' re-visioning of the high school curriculum is that it seeks to blend intellectual curiosity with an awareness of personal needs and social issues. Media literacy educators not only teach students how to think more closely about media, but also encourage them to reflect on the significance of media texts to their lives and to act on their insights.

At CML, we sometimes ask students, "Why does it matter?" Not surprisingly, Wiggins calls on readers to participate in a national discussion on the question, "What is the point of high school?" Wiggins believes that, once we hold that discussion, ". . . we might have a diploma worth giving and receiving in the modern age."

Wiggins' article appears in pages 28-33 of the March issue of *Educational Leadership* *http://www.ascd.org/publications/educational-leadership/mar11/vol68/num06/A-Diploma-Worth-Having.aspx* . If you're interested in learning more about Wiggins' approach to education, visit the website of Authentic Education, the educational consulting firm which he chairs: www.authenticeducation.org

## Teacher Education Programs Add New Media Literacy Course Requirements

In the last academic year, two universities in the United States, Appalachian State University and the University of California, Los Angeles, have added digital and media literacy course requirements to their teacher education programs. At ASU, the move is the result of a wave of institutional changes across the state. In the fall of 2010, K-12 districts across North Carolina re-worked many of their course offerings and graduation requirements to emphasize acquisition of 21st century skills. The ASU Reich College of Education revised its goals for the training of prospective teachers in response to these changes. Among these revisions are an emphasis on developing teachers who can understand the impacts of new technology on society; effectively access information and knowledge with current and emerging technologies, and understand and apply those technologies to K-12 instruction.

A new course, Teaching and Learning in the Digital Age, was added as a prerequisite to admission to the teacher education program, and its goals for digital literacy are more explicit, if not more ambitious. The course broadens the definition of literacy to encompass both traditional and "emerging literacies," while students develop "critical habits of mind" with respect to new technologies and media; consider the legal and ethical issues which arise from their use; integrate new technologies into instruction, and learn how to produce media as well.

At UCLA, the new media literacy course was designed and taught by Jeff Share, a faculty advisor in the Graduate School of Education and Information Studies. Share is also a former consultant with CML whose past assignments have included consulting and coaching for Project SmartArt at Leo Politi Elementary School in Los Angeles (2000-2002). The corresponding features of the Appalachian State and UCLA courses suggest that a common course template for teacher education students may be emerging. The UCLA course is described as an introduction to new media and technology tools ". . .that can be used to teach **with**, as well as an introduction to ways of teaching **about** these tools. . .Educators will critically question media and technology as well as explore new alternatives for creative multimedia messages in their classrooms."

Share uses a horizontal/vertical analogy to summarize the goals of the course. "My purpose is to change students' understanding of literacy—horizontally, to demonstrate that literacy is based in any form of communication, through pop culture, sounds, and all forms of media . . .and vertically, so that students can reach a deeper understanding of literacy, and appreciate how information and communication is connected to power. . . Media is an instrument that students need to be aware of and use, rather than being used by it."

In the 2009-2010 academic year, Share taught the course as an elective for students in the two-year M.Ed. program in Urban Teaching. The course began its life as a program requirement in Fall 2010, and Share will continue teaching this course in the next academic year.

### Sir Ken Robinson, Education Provocateur

A former professor of Arts Education at Warwick University, Sir Ken Robinson has become a widely recognized expert in the development of education, creativity and innovation. In this 2010 video, Robinson argues that our children are living in the most intensely stimulating period of history on Earth thanks to the development of new information and media technologies, while our system of education essentially (if not literally) anaesthetizes them. What capacities might they develop if their senses were not so deadened?

http://www.youtube.com/watch?v=zDZFcDGpL4U&safety_mode=true&persist_safety_mode=1

### Navigating the World of Systems Thinking: A Very Brief Guide

The Waters Foundation website offers a great introduction to the use of systems thinking in schools, but it can be overwhelming to the first-time visitor. Perhaps the best introduction is contained in the "What? Why? How?" section under "Using Systems Thinking." This offers a good overview. Next, peruse the Waters Foundation's materials on the habits of system thinkers. By asking yourself how you already use these habits in your business and/or practice and daily life, you'll gain an appreciation of their utility and may begin to think of ways you can apply them in the classroom (and elsewhere). To find these materials, look for the triangle figure that you will see on the left hand side of most pages within the site. Click on the "Habits of a System Thinker" link at the bottom of the triangle. You will also find materials on these habits in the WebEd Learning Modules section of the site. If you do start working through the learning modules, don't get discouraged by the complexity of stock-flow diagrams. Practice with tools such as connection circles and causal loop diagrams will be equally valuable.

The WebEd section also includes a brief and helpful, if promotional, article on the systems thinking movement in schools. To find it, click WebEd, Resources, WebEd Library, Articles, and look for Tracy Benson, "Developing a Systems Thinking Capacity in Learners of All Ages." Also, you may want to check out the introductory PowerPoint presentation from a recent systems thinking institute in Portland, Oregon. Among other things, you'll find some well-presented graphics for the iceberg diagram and the definition of mental models.

The link to the Northwest Systems Thinking in Schools Institute Materials is:
http://www.watersfoundation.org/index.cfm?fuseaction=content.display&id=305
A list of all presentation materials from the Institute appears on this page. Before proceeding, you will need to take a moment to register at the Waters Foundation website. A signup link appears on the top right of the page. Once you're finished registering, click on the link for Tim Taber's "Friday Intro to Systems Techniques," which appears at the top of the list of presentations. You will be prompted to download a zipped file titled "NW Inst. Intro Mat'ls 2011." Once you open this file, you will find a folder titled "Intro Session Web Docs." Click on this folder to find a list of documents in PDF format. The file for this PowerPoint presentation will be at the top of this list.

Finally, here are links to a video and an article from this systems thinking institute which may help you understand what systems are and how they behave.

Eric Berlow video:
http://www.ted.com/talks/eric_berlow_how_complexity_leads_to_simplicity.html

Donella Meadows article:
http://www.sustainer.org/pubs/Dancing.html

# Med!aLit Moments

## Bringing the Audience into the Loop

Causal loop diagrams, like those used by the Systems Thinking in Schools Project (see our main research article for more) can help students more readily grasp the dynamics of complex relationships, such as the relationships between audiences, producers, and media texts. In this MediaLit Moment, your students will work with a causal loop diagram to learn how the act of consuming advertising involves them in the system of media production.

**Ask students to describe and analyze the relationships between video game producers, advertisers and themselves.**

**AHA!:** My interest in video games sets everything else in motion!

**Key Question #5:** Why is this message being sent?

**Core Concept #5:** Most media messages are organized to gain profit and/or power

**Grade Level:** 5-8

**Materials:** Computer, data projector, projection screen, high speed internet connection (optional)

**Activity:** Begin by asking students what they like about their favorite video games. Next, show them the box art or the game trailer for Outland, a sword and fantasy game released last year. Links are given below:

Outland box art
http://www.agreenmushroom.com/2011/06/outland-impressions.html

Outland game trailer
http://www.gametrailers.com/video/rogue-launch-outland/713337

Ask, does the box art or trailer make them want to buy the game? Why or why not?

Next, draw a circle or a triangle on the board (or interactive white board, if you have one). Mark three points on the figure, and add the following labels: Advertisements produced, You, and Video Games sold.

Now ask students to come up with some educated guesses about the relationship between themselves (You) and Video games sold and Advertisements produced. You might want to ask them what they do when an advertisement begins to interest them in a game.

Complete the causal loop diagram with your students by adding arrows to connect the three points and explain that video game producers create ambitious ad campaigns for new products. The advertisements catch the eye of new potential buyers like themselves. Their interest eventually leads to increased video game sales, increased sales of the product lead to more advertisements for the game, and the advertisements attempt to keep them "hooked" on the game and attract more potential buyers (especially their friends!) to the game. In finishing this activity, remind students how essential they are to all these relationships.