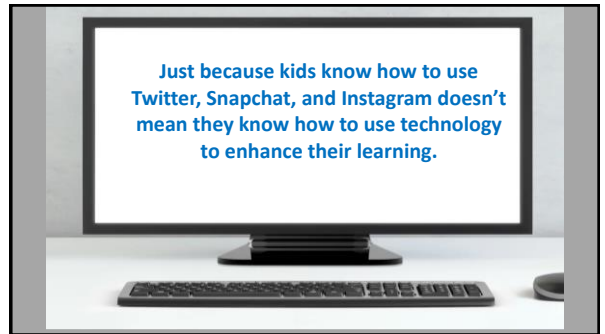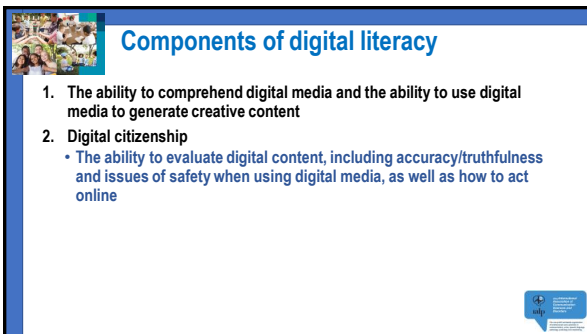**Digital Education for 21st Century Children**
Carol Westby, PhD
Bilingual Multicultural Services, Inc.
Albuquerque, NM
mocha@unm.edu

Narrative Language and Digital Literacy Around the World: Helping Clinicians Know What to Do

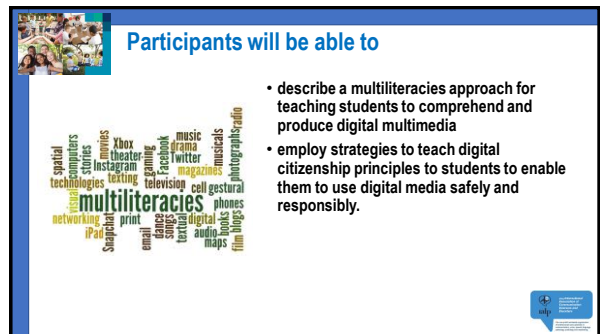Child Language Committee Online Composium
October, 2021

Just because kids know how to use Twitter, Snapchat, and Instagram doesn't mean they know how to use technology to enhance their learning.
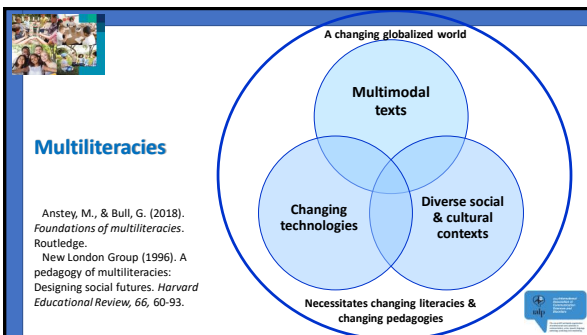

Components of digital literacy

1. The ability to comprehend digital media and the ability to use digital media to generate creative content
2. Digital citizenship
   - The ability to evaluate digital content, including accuracy/truthfulness and issues of safety when using digital media, as well as how to act online

---

Participants will be able to

- describe a multiliteracies approach for teaching students to comprehend and produce digital multimedia
- employ strategies to teach digital citizenship principles to students to enable them to use digital media safely and responsibly.

Multiliteracies

Anstey, M., & Bull, G. (2018). *Foundations of multiliteracies*. Routledge.

New London Group (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review, 66,* 60-93.
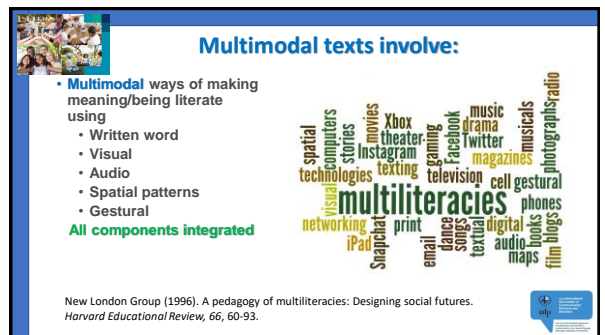
A changing globalized world

Multimodal texts

Changing technologies

Diverse social & cultural contexts

Necessitates changing literacies & changing pedagogies

Multimodal texts involve:

- **Multimodal** ways of making meaning/being literate using
  - Written word
  - Visual
  - Audio
  - Spatial patterns
  - Gestural
- **All components integrated**

New London Group (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review, 66,* 60-93.

Multimodal literacy in 5th Grade Science Weather Lesson

Multimodal Literacy in 5th Grade Science Weather Lesson

Components of Multiliteracies

The What

The Why

The How

Cope, B., & Kalantzis, M. (2009). Multiliteracies: New literacies, new learning. Pedagogies: *An International Journal, 4,* 264-295.

The why of multiliteracies: Desired outcomes

To create the conditions for learning that support the growth of persons comfortable with themselves as well as flexible enough to collaborate and negotiate with others who are different from themselves in order to forge a common interest.

Persons with a comfortable, flexible sense of identity who can collaborate and negotiate with others who are different from themselves

Multiple modes of making meaning

Cultural/social ways of making meaning

The What of Multiliteracies

Available Designs: available structures/ grammars/genres

Designing: what students do to interpret or make meaning from the available designs.

The Redesigned: the literacies students produce

• **Students take Available Designs, interpret them, and then transform them for their own purposes**

New London Group (1996). A Pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review, 66,* 60-92.

Digital Literacy

Consuming

Producing

Consuming more than Reading
Producing more than Writing

Anstey, M., & Bull, G. (2018). *Foundations of multiliteracies*. Routledge.

2

The Kinds of Designs

Kinds of Designs

- Text: vocabulary/ metaphor, syntax, genre structure
- Visual: perspective, still /moving image, layout
- Audio: music, ambient sounds, noise
- Spatial: proximity, spacing, interpersonal distance
- Gestural: body language, expressions, gaze, clothing

Interpersonal Distance Varies According to the Relationship

Cope, B., & Kalantzis, M. (2009). Multiliteracies: New literacies, New learning. *Pedagogies: An International Journal, 4,* 264-295.

Must know the content/structure of the Designs

Must have the meta-language to talk about the designs

Cope, B., & Kalantzis, M. (2009). Multiliteracies: New literacies, new learning. *Pedagogies: An International Journal, 4,* 264-295.

Types of Meta-language for Design

- **The codes and conventions of the semiotic systems (vocabulary, "grammar," text structure)**
  - **Creating an intertext by integrating written and graphic information and considering the page layout and choice of fonts as they do so**
- **The thinking processes involved in consuming and producing text**
  - **Metacognitive awareness**
- **Describing and navigating online text**
- **The technologies associated with producing and consuming text**
  - **Synthesize information across sites**

The How of Multiliteracies: Knowledge Processes

Using multiliteracies in new & creative ways

Experiencing multiliteracies in naturalistic contexts

Thinking with language & multi-modalities

Developing knowledge of language (vocabulary, syntax) to talk about all the modalities

- Transformed Practice/ **Applying**
- Situated Practice/ **Experiencing**
- Critical Framing/ **Analyzing**
- Overt Instruction/ **Conceptualizing**

Multimodal literacies for Native American Students

Mode	Dimensions	Examples of Culturally-Based and Multimedia Literacies
Visual	Still or moving image, sculpture, view, vista, scene, perspective, page layouts, screen formats, size/shape/ color, perspective, screen formats	Creating video documentaries – use of camera angles, zooming, and composition of foreground and background, uploading images, creating various forms of art – glasswork, pottery, sculpture, carving, drawing, painting, weaving of blankets, clothing, and baskets
Audio	Music, ambient sounds, noises, alerts, voice	Playing a drum/flute, chanting or singing a song, generating sound effects for a video
Gestural	Body language, movements of the hands and arms, expressions of the face, eye movements and gaze, gait, clothing, regalia, hair style	Producing or acting out a story, participating in a powwow or in traditional games and sports, performing a traditional dance, using sign language

Westby, C.E., & Inglebret, E. (2012).Native American and worldwide indigenous cultures. In D. Battle (Ed.), *Communication disorders in mulitcultural populations* (pp 76-101). Elsevier. (with Chixapkaid Michael Pavel)

Multimodal Literacies for Native American Students

Mode	Dimensions	Examples of Culturally-Based and Multimedia Literacies
Spatial	Landscape, ecosystem, graphic design, cityscape, architecture/building proximity, spacing, layout, interpersonal distance, territoriality, streetscape	Understanding the ecosystem of a particular place (animals, plants, water, land, air, climate), using Geographic Information Systems (GIS) as a tool for mapping landscape attributes, researching traditional place names and food sources, traditional tracking and hunting
Spiritual	Daily life activities, holistic world view focused on balance among mind, body, spirit, and environment	Learning indigenous stories of creation and relatedness to ancestors, viewing of language as sacred expression, learning through visions and dreams, understanding that ceremonies often reflect private knowledge not be shared with outsiders
Linguistic	Morphology/syntax, vocabulary/metaphor, genre structure of oral/written narrative and expository texts	Expressing humor, learning and teaching an indigenous language, learning about the history of a particular group of people through various text forms – books, internet sites, oral speeches or stories, interviews with elders, poetry, petroglyphs, pictographs

Slide 1

Multiliteracy in a Native American Curriculum

Shadow of the Salmon
Respect the Salmon, Respect Yourself

A Resource Guide
For Eighth Grade Teachers

Canoe Journey

https://education.wsu.edu/documents/2015/08/shadow-of-the-salmon.pdf/
Video: https://www.youtube.com/watch?v=hdnTWpPMZ3k

Slide 2

The How of Multiliteracies
Pedagogy

Situated practice/experiencing
The known ---------- The new
- Educators provide learning activities grounded in experiences that
  - Are meaningful to students
  - Relate to personal experiences from students' lives in and out of schools
- Students
  - **Known:** Reflect on familiar experiences
  - **New:** Make observations in new situations

- Share experiences about salmon and canoes
- Participating in a canoe journey
- Watch video, "Shadow of the Salmon"
- Tribal representatives share indigenous perspectives on salmon
- Read/listen to stories related to ecosystem of which salmon is a part (e.g., Salmon Woman and Her Children)

Slide 3

The How of Multiliteracies
Pedagogy

Overt instruction/conceptualizing
By naming ---------- With theory
- Educators explicitly
  - Teach the metalanguage to talk about the Available Designs
    - Vocabulary and syntax
  - Provide strategies to promote comprehension of the various multiliteracies
  - Scaffold students as they engage in The Redesign/production of new meanings
- Students
  - **By naming:** Define terms; classify
  - **With theory:** Make generalization using concepts/connect terms

- Do KWL (what I know; what I want to know: what I learned)
- Discuss values/beliefs/customs depicted in video/stories
- Facilitate use of metalanguage to make explicit text design elements and comprehension strategies
- Discuss parts/structure of video
- Discuss how words/video depict important concepts/ concerns

Slide 4

The How of Multiliteracies
Pedagogy

Critical framing/analyzing
Functionally ------ Critically
- Students **functionally**
  - View topic in relation to cultural context; make comparisons
  - Make logical cause-effect connections
- Students **critically**
  - Evaluate their own and other people's perspectives
  - Interpret texts, graphics, and sound in relation to a context – who developed this Applied Design; what were they trying to do? why?

- Explore multiple websites
  - Examine multiple perspectives (Native & government) of natural resource management practices developed to revitalize salmon population
- Analyze multiple solutions for saving salmon
- Compare Native and Western scientific solutions
- Determine whether conclusions of statistical studies reported in media are reasonable

Slide 5

The How of Multiliteracies
Pedagogy

Transformed practice/applying
Appropriately ----- Creatively
- Students
  - **Appropriately** apply Designs or new learning in real world situations
  - **Creatively** use what they have learned about Designs in new ways and in new situations

  Select appropriate tools, texts, and technology for a task

- Write a letter to editor of local newspaper presenting persuasive argument in relation to historical events, such as treaties between US government and American Indian tribes, and the current status of the salmon
- Apply scientific and Native knowledge to develop a solution to loss of salmon
- Develop a public service announcement or podcast

Slide 6

Albuquerque, NM USA

Slide 1:

5th Grade science lesson
Water Conservation

Situated Practice
Describe homeland environment photos
Visit Natural History Center
Hike in desert/mountains

Overt Instruction
Vocabulary for conservation, water cycle, weather, temperature
Cause-effect sentence structure
Use meteorological instruments

Language Learner

Critical Framing
Analyze/explain temperature/rainfall trends; relationships between temperature and CO_2 concentration
Evaluate arguments on climate change
Survey family on water conservation

Transformed Practice
Produce PSA digital video
Present to K-1st on arroyo safety
Produce personal story of experiences/learning from the project

---

Slide 2:

Learning by Design Placemat
http://newlearningonline.com/learning-by-design/the-placemat

EXPERIENCING		APPROPRIATELY APPLYING CREATIVELY	
Share personal stories of their experiences in the desert, mountains	• Take hikes • Visit natural history museum • Take photos/videos	• Create a journal (blog) using photos from hike • Research how your city will be affected by climate change in the next 20-30 years future.	• Make a ppt presentation on arroyo safety to share with K-1 • Produce PSA digital video on need for water conversation

Water conservation; climate

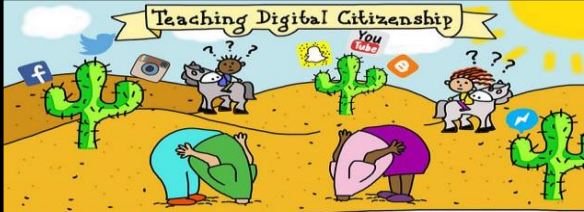| CONCEPTUALISING		FUNCTIONALLY ANALYSING CRITICALLY	
• Vocabulary for conservation, weather, temperature • Cause-effect sentence structure • Learn to operate meteorological equipment	• Research water access, climate in different parts of world • Explaining how water access affects activities	• Analyze/explain temperature/rainfall trends; relationships between temperature and CO_2 concentration	• Survey community on attitudes about water conservation • (survey monkey) • Discuss strategies for conserving water in different areas

---

Slide 3:

Digital Citizenship

A digital citizen is someone who uses technology responsibly to learn, create, and participate

---

Slide 4:

Teaching Digital Citizenship

We can't tell our students "Not to" use digital media, or "Be careful" and then put our heads in the sand. Instead, we need to teach them how to be safe & responsible digital citizens (because they're going to be using it anyways.) @sylviaduckworth

---

Slide 5:

TEACHING DIGITAL CITIZENS IN TODAY'S WORLD

DIGITAL for GOOD
RAISING KIDS to THRIVE in an ONLINE WORLD
RICHARD CULATTA

James, C., et al., (2019). *Teaching digital citizens in today's world: Research and insights behind the Common Sense K–12 Digital Citizenship Curriculum*. Common Sense Media.

commonsense.org
wideopenschool.org

CEO of the International Society for Technology in Education.
https://www.iste.org/areas-of-focus/digital-citizenship

Slide 6:

A Digital Citizen is…

• **Balanced:** I prioritize my time and activities online and offline
• **Alert:** I know how to be safe online and create safe spaces for others
• **Informed:** I evaluate the accuracy, perspective, and validity of online information
• **Inclusive:** I engage with others online with respect and empathy

Culatta, R. (2021). *Digital for good: Raising kids to thrive in an online world*. Harvard Business Review Press.
https://www.iste.org/areas-of-focus/digital-citizenship

Slide 1

The balancing act of a digital life

Balanced

Balance our digital lives:
Participate in a variety of online activities and make informed decisions about how to prioritize their time in virtual and physical spaces

Slide 2

Media Balance

Using media in a way that feels healthy and in balance with other life activities (family, friends, school, hobbies, etc.)

What makes a healthy media choice?

What?

What are the media you're consuming (or creating)?

What platforms are you using to consume the media (i.e., a streaming platform like Netflix)?

or ...

What device(s) are you using to consume (or create) the media?

When?

When are you consuming (or creating) the media?

What time of day? What day of the week?

What else is happening at this time (i.e., is it during dinnertime, right before bed, etc.)?

How much?

How much media are you consuming?

How long are you spending with the media at one time?

How often are you consuming the media?

Slide 3

My Media Plan
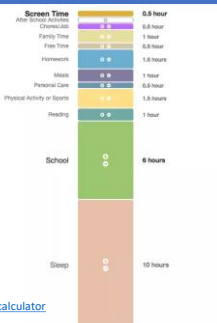
Directions
Think about which media and non-media choices help you feel healthy and balanced. Then, use the chart below to plan out your perfect day. For each choice, fill out the "What?," "When?," and "How Much?" columns. You can include more than one activity in each row — just draw in the lines yourself!

What?	When?	How Much?
I played an online game (Fortnite) on my parents' computer.	On Saturday, pretty much all day	Probably about six hours
Night		

Slide 4

Media time calendar

- Screen time
- Free time
- After school activities
- Reading/homework
- Family time
- School time
- Personal care
- Meals
- Physical activity
- Sleep
- Own category

https://www.healthychildren.org/English/media/Pages/default.aspx#calculator

Screen Time		
After School Activities Chores/Job		0.5 hour
Family Time		0.5 hour
Free Time		0.5 hour
Homework		1.5 hours
Meals		1 hour
Personal Care		0.5 hour
Physical Activity or Sports		1.5 hours
Reading		1 hour
School		6 hours
Sleep		10 hours

Slide 5

Balanced: Have Children Evaluate Apps

- **How does the app connect me to other people?**
  - Who are the people: people I know, don't know
  - What kinds of interactions does this app allow
- **How does the app keep me engaged?**
  - Quality content
  - Habit-inducing measures
- **Does this app makes sense to me?**
  - Based on age, disposition, ability and willingness to assess risk, ability to self-regulate
- **What do credible third-party reviewers say about the app?**

Culatta, R. (2021). *Digital for good: Raising kids to thrive in an online world*. Harvard Business Review Press.

Slide 6

Alert
**(Privacy & Security
Digital footprint & Identity)**

Aware of digital actions and know how to be safe and create safe spaces for others online

Knowing your friends

What information can I share?

Private Information - NO

- Information about you that can be used to identify you because it is unique to you
  - Full name
  - Address
  - Birthdate
  - Name of school
  - Number/names of siblings

Personal Information - YES

- Information about you that cannot be used to identify you because it is also true for many other people
  - Hair color
  - City you live in
  - Pets you have
  - Games you like playing

Phishing:
When someone poses like a school or company and sends you a personalized message trying to trick you into providing information

Private Data

Don't Feed the Phish

How to catch a phish

- **Sense of urgency:** The message sounds urgent; the sender says you only have a limited time to respond.
- **Spelling and grammar errors:** A real company does not send out messages with such errors.
- **"Friend" in trouble:** You see a photo of someone you know, but the message isn't really from them.
- **Too good to be true:** Identity thieves often offer easy chances to win free money or prizes.

Clickbait

Just ignore it. It's click-bait.

YOU'LL NEVER BELIEVE WHAT THIS WORM WAS CAUGHT DOING!

An image or headline that tries to get you to click on it, usually for advertising purposes

---

Cues to clickbait

- **Clue #1:** It seems **impossible** or **unbelievable**.
  FOR EXAMPLE: "Think Your Cat Loves You? It's Actually Plotting to Make You Sick."

- **Clue #2:** It tries to **shock** you.
  FOR EXAMPLE: "You Won't Believe This!" or "The Answer Is Genius!"

- **Clue #3:** It refers to a **celebrity** or **popular topic**.
  FOR EXAMPLE: "Kylie Jenner Talks Selfies and Bubble Tea: You Won't Believe What She Says!"

Man Kisses A King Cobra Snake! You Won't Believe What Happens Next!

Five Pictures That Prove This Place Has The Most Beautiful Sunsets

---

Informed
(News and Media Literacy)

Be critical thinkers and creators:
Evaluate the accuracy, perspective, and validity of digital media and have developed critical skills of curating information from the digital world

---

NEWS & MEDIA LITERACY
We are critical thinkers & creators.

DIGITAL CITIZENSHIP | GRADE 3

Is Seeing Believing?

fake?

real?

common sense education

Alter: To change the way something looks, sometimes using a computer or other digital tools

More obvious | Less obvious

Why do people alter digital photos and videos?

- Recognize that photos and videos can be altered digitally.
- Analyze altered photos and videos to try to determine why they have been altered.

Altered photos

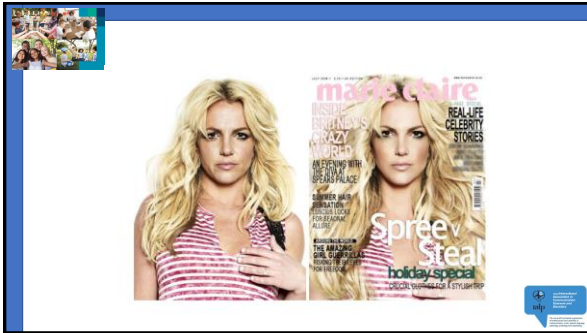- What was altered in the second version of the photo?
  - *The cracks and tears in the photo were taken out. Her features were lightened.*
- Why do you think it was altered? What was the person who altered it trying to accomplish?
  - *It was altered so it could be seen more clearly. The person in the photo is probably someone important to the person altering it, so he or she wants it to be in better condition.*

Altered photos

- **What was altered in the second version of the photo?**
  - *Her complexion was made smoother, and her wrinkles were removed. Her face and chin were made skinnier.*
  - *More hair was added.*
- **Why do you think it was altered? What was the person who altered it trying to accomplish?**
  - *This image was altered to make it look more glamorous and attractive. It was done to try to get more people to buy the magazine.*

How to Hitchhike

- How was this video altered?
- Why do you think Zach King created this video?

https://www.youtube.com/watch?v=TttDafkNzWA

Inclusive
(Relationships & Communication, Cyberbullying)

Open to hearing and recognizing multiple viewpoints and engaging with others online with respect and empathy
Know the power of words & actions
Be kind, respectful, civil

UK Safer Internet Centre

https://www.childnet.com/resources/digiduck-stories

Digiduck's Big Decision

Digiduck's screen went ping and he saw a new message from a friend. "How exciting!" he thought. He opened it and giggled.

Someone had made a picture of Proud.pig looking very silly indeed. "That is so funny!" chuckled Digiduck. "I must show my friends." Before he

Before he could send the photo to everyone, Mummy Duck called up the stairs, "Bedtime darling duck! Wash your feathers, hop into bed and I'll be up as quick as a flap to tuck you in."

The Power of Words

DIGITAL CITIZENSHIP | GRADE 3

CYBERBULLYING, DIGITAL DRAMA & HATE SPEECH
We are kind & courageous.

common sense education

Objectives

1. Understand that it's important to think about the words we use because everyone interprets things differently.
2. Decide what kinds of statements are OK to say online and which are not.
3. Identify ways to respond to mean words online, using S-T-O-P.

What should you do when someone uses mean or hurtful language on the internet?

How to deal with on-line hate

✓ **S**tep away.
✓ **T**ell a trusted adult.
✓ **O**K sites first.
✓ **P**ause and think online

What should you do when someone uses mean or hurtful language on the internet?

Power of Words

• What does this video say about the saying "Sticks and stones may break my bones, but words can never hurt me"?
• Why do you think those other players said those things to Guts?

https://www.youtube.com/watch?v=8rOnMl26dR8

Empathy

To imagine the feelings that someone else is experiencing

Directions

Read the story below and then work with a partner to answer the questions that follow.

Rani loves a website where she can play in a virtual world and chat with other players. Lately, Rani has been playing in a new area. She started receiving some mean messages from the other players.

> Player A: What are you doing here? You don't belong here.
> Player B: Yeah. Go AWAY!
> Player A: You're ruining the game!

add comment...   send

1. How would you feel if you were Rani reading those messages? *I would feel ...*
I would feel badly. It would make me sad and like I wasn't welcome to play the game anymore.

---

2. Why do you think people send these kinds of messages to people they don't know? *People send these kinds of messages because ...*

People send these kinds of messages because they're trying to make a joke or because they feel badly themselves and want to take it out on others.

3. What advice would you give Rani to respond to this situation? Remember S-T-O-P.

- She could stop playing the game.
- She could tell a parent or another trusted adult.
- She could report the other players to the game.

All Good Digital Citizens:

- Protect private information for themselves and others
- Respect themselves and others
- Stay safe online
- Stand up to Cyberbullying when they see it happening
- Balance the time they spend online and using media
- Are kind, respectful, civil
- Carefully manage their Digital Footprint