Listening and Language Learning: Challenges for the Digital Age

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Once upon a time (about 1989 actually)…

…there was a handsome prince who had a Macintosh Plus.

http://es.wikipedia.org/wiki/Macintosh_Plus

One day, he discovered it could talk.

Outline

- Background
- Digital affordances in listening—a basic framework
- Content, tools and strategies
- New roles for developers, teachers and learners

The Digital Age: A Golden Age

- Expansion of digital A/V materials: CD-ROMs, DVDs, and especially, *online resources.*
- Expansion of access: static and mobile
- Increased presence of comprehension supports—also referred to as “meaning technologies”

But there are challenges…

- Identifying and mastering technologies and tools
- Locating and selecting appropriate digital resources to support language learning
- Adapting or creating effective tasks, activities, strategies, and procedures
- New roles and responsibilities for developers, teachers, and learners

Some Listening Distinctions

- Two-way vs. one-way
- Live vs. recorded
- Authentic vs. created or adapted for language learning (materials and/or task)
- For information, socialization, or entertainment
- For comprehension or language learning
- *My focus is one-way listening of recorded media for language learning*

Approaches to Listening

- Listen and repeat (e.g., ALM—language laboratory technology)
- Traditional 3-part listening lesson (Field 2008)
  1. Preteach vocabulary
  2. Listen + comprehension questions
  3. Language analysis +/- listen and repeat

Approaches to Listening

- "Modern" listening lesson (Field 2008)
  1. Pre-listening
     - Establish motivation/context; activate schemas
     - Teach critical vocabulary
  2. Extensive listening, general Qs
  3. Intensive listening, detailed Qs
  4. Post-listening
     - Functional analysis
     - Additional vocabulary
     - Check transcript
     - (Integrate with other skills)

Approaches to Listening

- Listening strategies--primarily for individual use, but can be modeled in class:
    1. Pre-listening
    2. While listening
    3. Post-listening
- Metacognitive strategies
    1. Planning
    2. Monitoring
    3. Reflection

What about tech & listening?

- Flowerdew & Miller (2005); Field (2008)—limited references to digital technology
- Vandergrift & Goh (2012)—full chapter on listening in multimedia environments
- Plass & Jones model (Jones 2006)—synthesis of Interactionist SLA and Mayer's Cognitive Theory of Multimedia

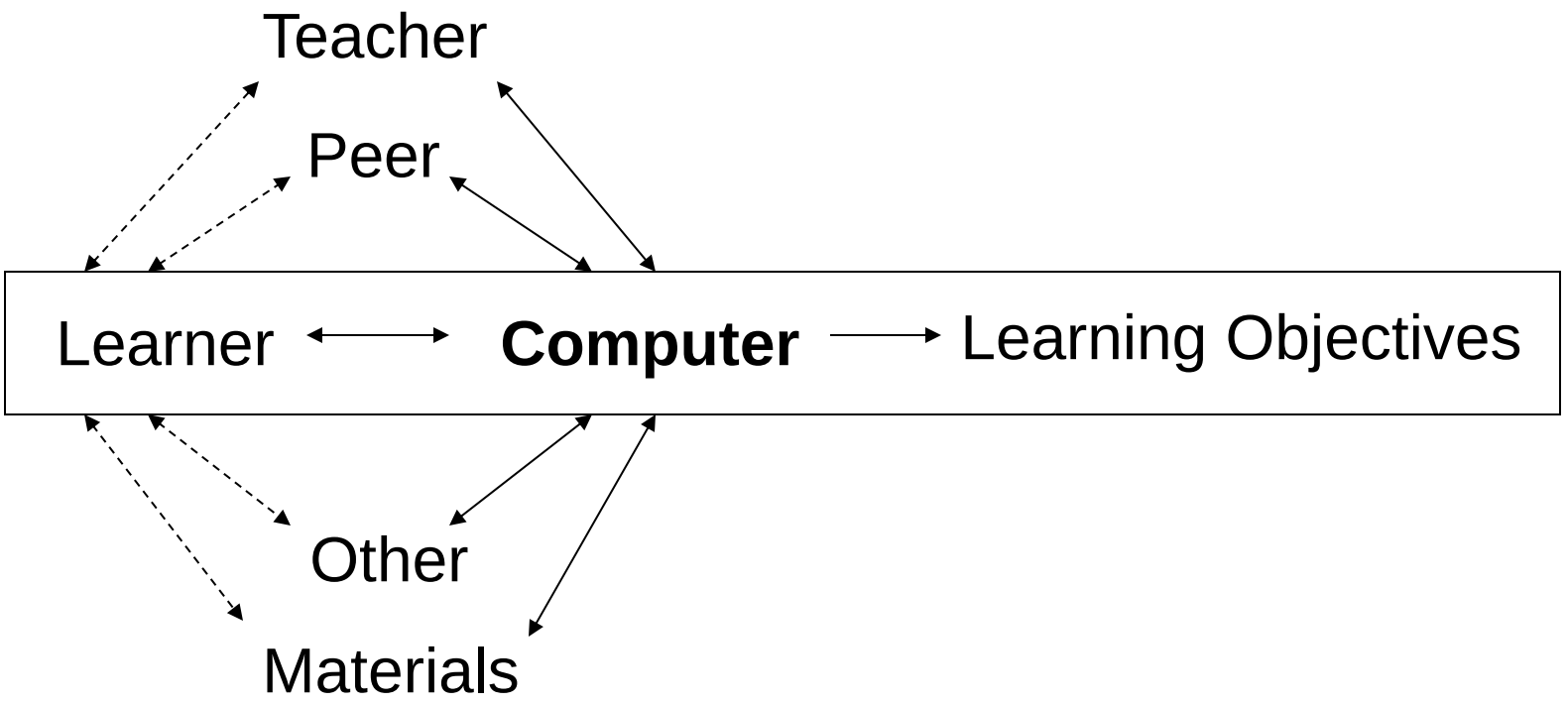
Example listening unit

- Advanced Listening and Vocabulary Development
- First day of class: www.stanford.edu/~efs/693b/week1.html

Framework for the affordances of digital technology

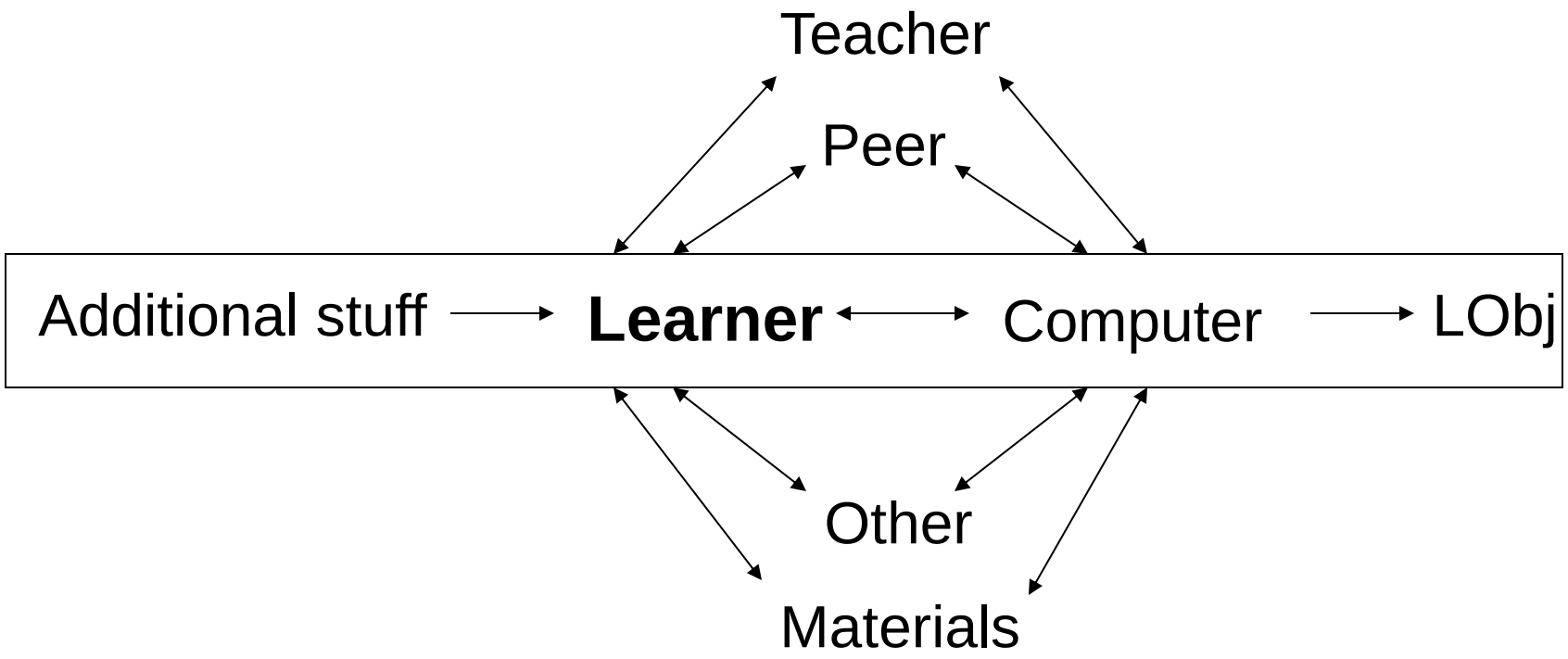
- Stimulate informed development
- Aid in recognizing range of options
- Introduce a skill-specific, *computer-centered perspective*

Computer-centered perspective



Levy & Hubbard (2005). “Why call CALL ‘CALL’” (editorial). *CALL Journal* 18.3.

Learner-centered perspective



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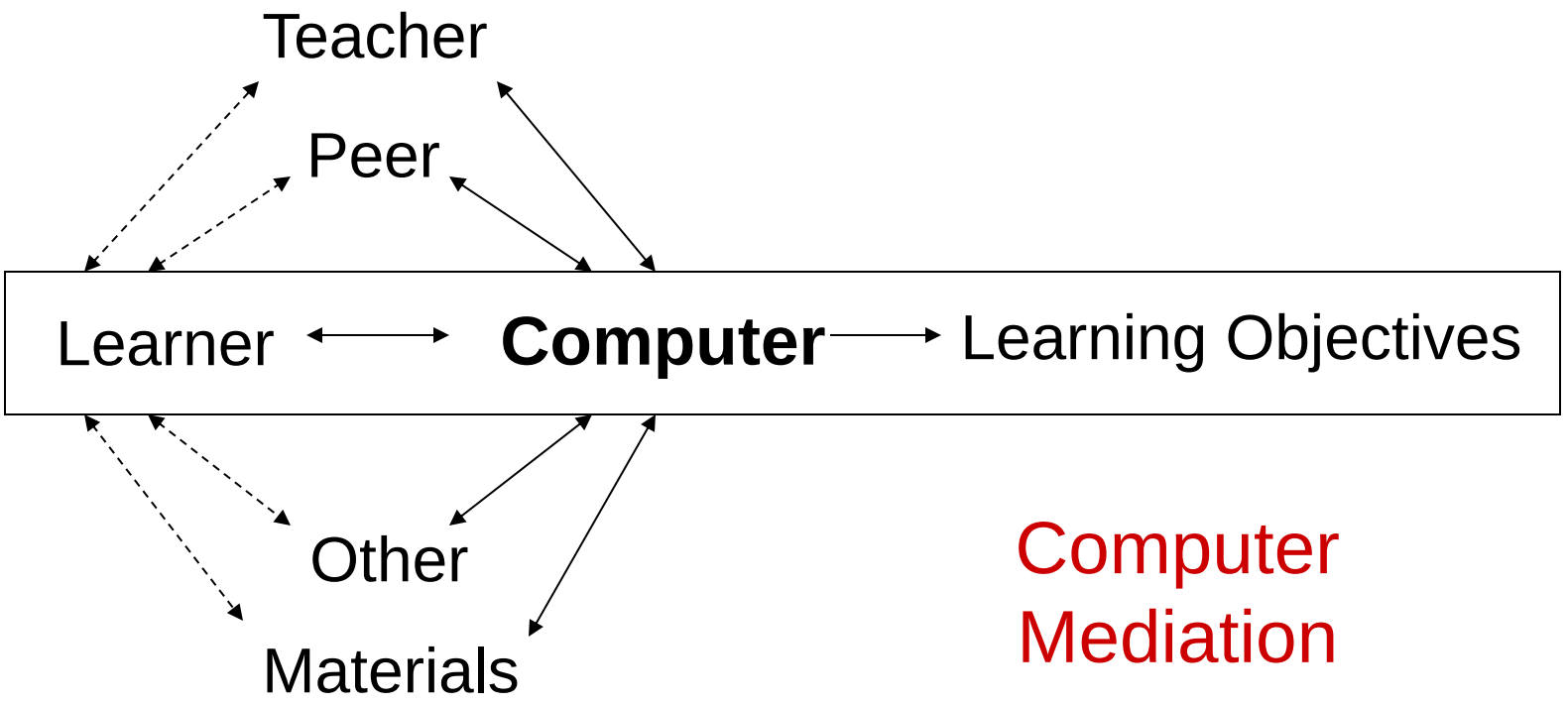
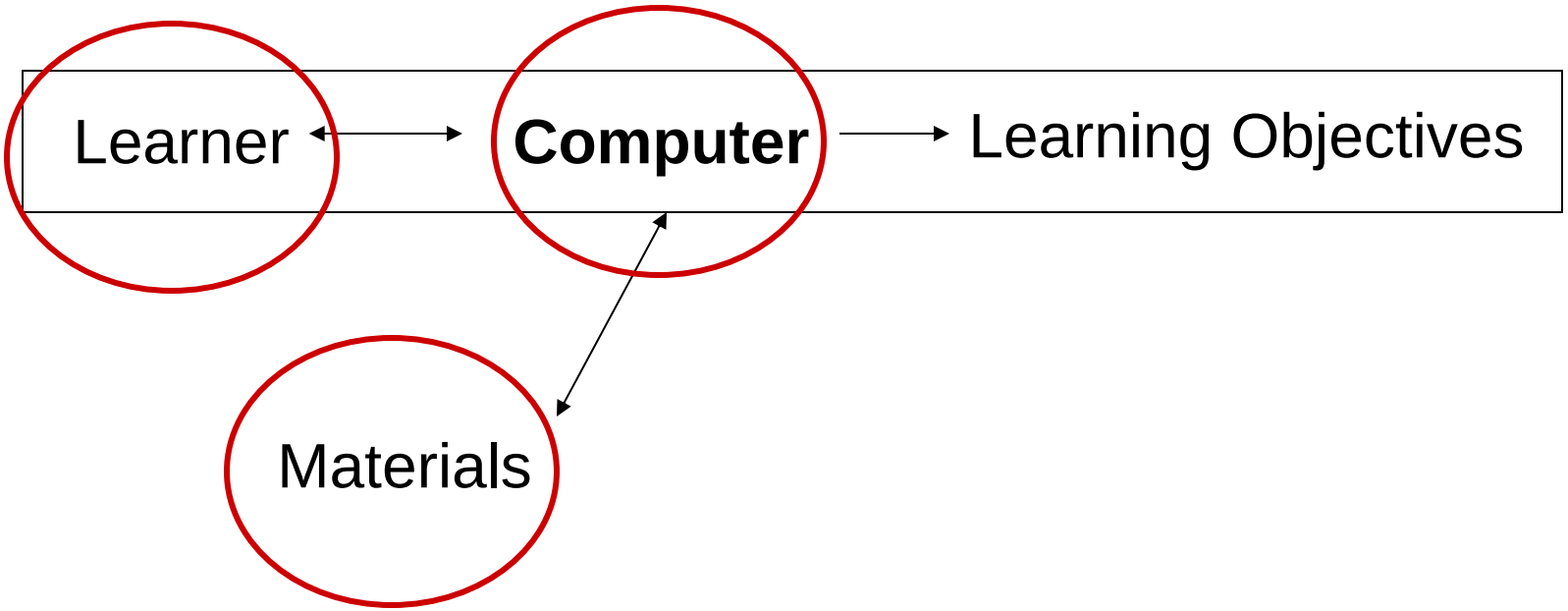
Computer-centered perspective



Computer Mediation

Levy & Hubbard (2005). “Why call CALL ‘CALL’” (editorial). *CALL Journal* 18.3.

Computer-mediated listening (one-way, intentional)



Some CM listening affordances

- Archiving & indexing
- Transferring
- Linking
- Time control
- Transforming

Archiving & indexing

Make audio & video content available

- Local, portable, and networked archiving
- Local and networked indexing
- Searchability

Transferring

- Broadcast (webcast)
- Streaming
- Downloading

Linking

- To text (subtitles, transcripts…L1 or L2)
- To pictures/graphics
- To meaning supports (definitions, translations, explanations…L1 or L2)

Time management

- *When* to allow archiving, transferring, linking, etc. (condition or chronology)
- Recording time on task
- Controlling time on task
- Timeshifting
  - Anytime, anywhere availability
  - Standard & enhanced AV controls
  - Speed control

Transforming

- Text to speech: *anything* can be listening
- Speech to text (ASR)
- Speech to graphic (wave form, contour)
- Compression
  - Audio
  - Video
- Change quality/enhance (equalizer, normalizer, etc.)

Think about the power!

- Archiving & indexing
- Transferring
- Linking
- Time management
- Transforming

How can we use this to enhance language learning?

How can we avoid (or limit) mistakes?

Selecting Materials

- General principles
  - Familiar material
  - Interesting material
  - Correctly leveled material: add www.lextutor.ca/vp/bnc to intuition
- Searching
  - Google video search (includes YouTube)
  - Searching for captioned videos with Advanced Search

Materials Selection: A Problem

The kid in the candy shop…

There is a wide range of interesting, authentic online content ideal to support autonomous language learning, but

How can learners select materials that will engage them *and* assist them in their language learning objectives?

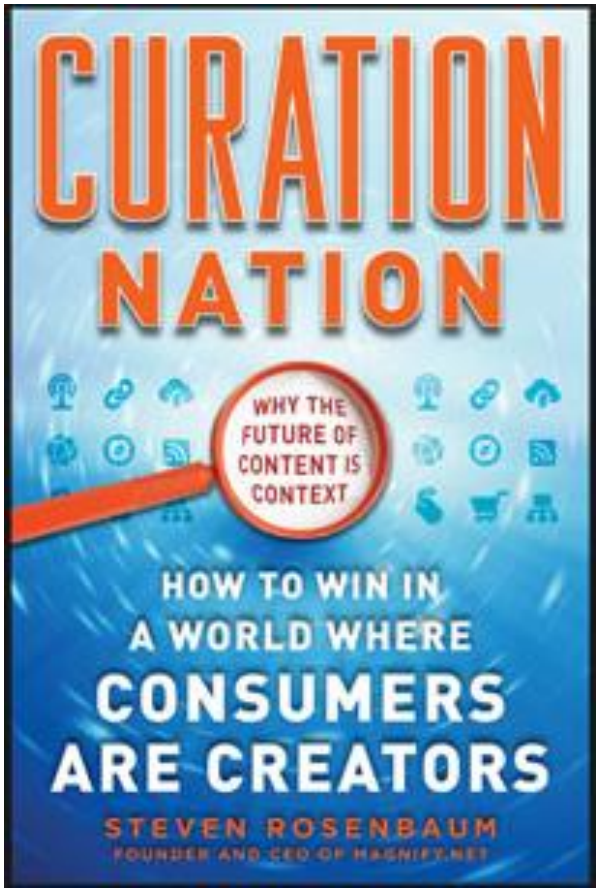
A Solution: Curation

- Curation: collection and organization of material with *value added* by an expert: traditionally museums, art galleries, etc.
- Requires human intervention, not just a clever program (Huffington Post vs. Google News)

Curation

Steven Rosenbaum (2011). *Curation Nation*

"…the future of online content."



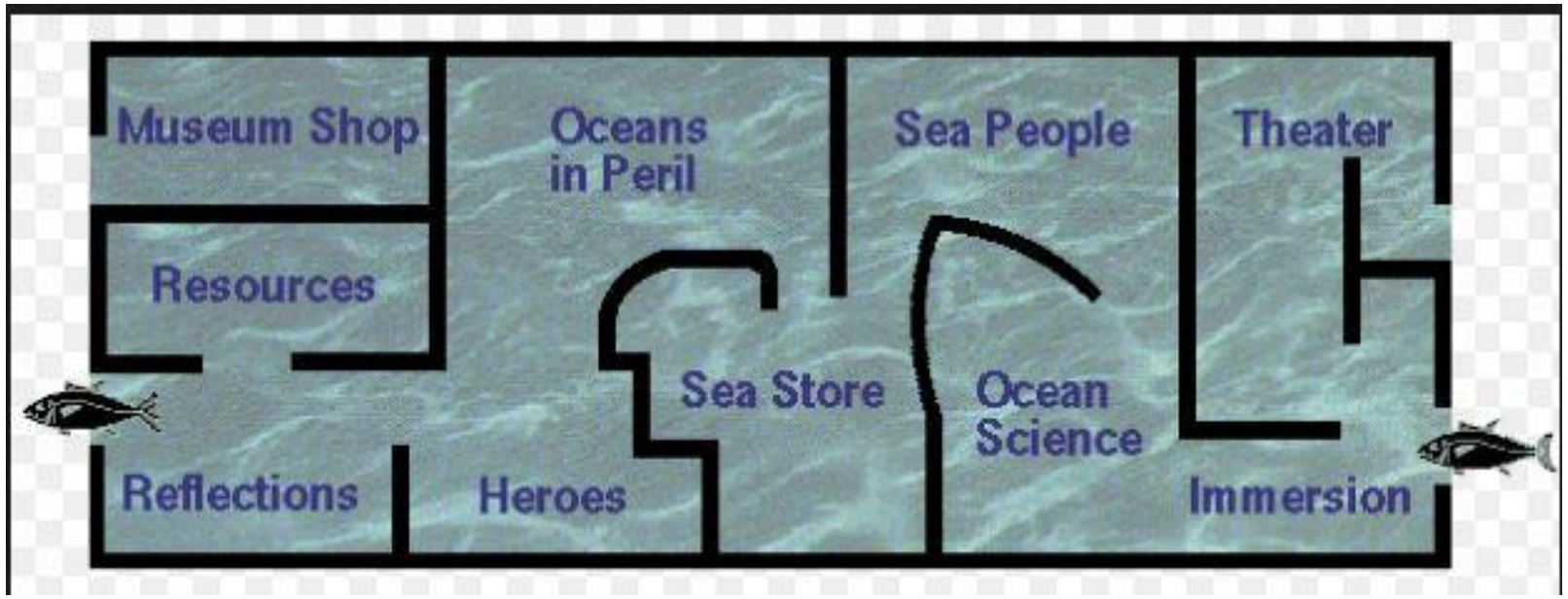
Curation

Curation is not the same as simple *aggregation* or *listing or tagging*

> "When was the last time you went into a museum and found a pile of unrelated stuff that someone thought was 'interesting'? That's not a curated collection, it's a garage sale."
>
> Ben Harris-Roxas (http://www.harrisroxashealth.com/2012/03/a-curator-is-not-a-digital-dilettante/)

The Museum Analogy

…collection and organization of material with *value added* by an expert…



From Smithsonian *Ocean Planet* Exhibition:
http://seawifs.gsfc.nasa.gov/OCEAN_PLANET/HTML/ocean_planet_overview.html

The Museum Analogy

Curator's Tours

Below are listed a number of special tours of the *Ocean Planet* Exhibition. These tours are designed for specific age groups, interests and level of detail. Please select the tour you wish to take by clicking on one of the buttons listed below.

- Ocean Planet Preview Tour
- Biodiversity Tour
- Oceans and Africa
- Women and the Sea
- Pollution
- Sea Surprises

Curation

Curation in this sense also differs from

- Creation
- Re-creation
- Adaptation
- Sampling
- Synthesizing…

Curator's role for language learning content

- Collect content (digital materials)
- Organize
- Sequence
- Provide language level information (strong version = 'systemize' (Decoo 2010)
- Add pedagogical support (note—this can be wide ranging, just as in a museum)

Ideal Content Qualities

- Freely and legally available
- Likely to be interesting
- Good technical quality
- Stable
- L2 transcripts/captions
- Complementary materials

Example: Curated TED Talks

- Background
  - Advanced listening and vocabulary class: www.stanford.edu/~efs/693b
  - Goal: work on independent projects and continue after course ends
- TED Talks: popular but often frustrating—reflective reports show problems with comprehension due to speech rate, accent, and vocabulary level
- TED project: curate TED talks for independent use (Expert = me)

Process

1. Get TED database
2. Skim for potential themes/candidate talks
3. Gather candidates and analyze transcripts
   - Word for rough speed in words per minute
   - Vocabulary profiler (www.lextutor.ca/vp/bnc)
   - Skim transcript for unusual terms, idioms

Process

4. Listen to determine accent and other potential challenges
5. Select final group (4-5 talks) and sequence
6. See www.stanford.edu/~efs/693b/TED1.html

Recent changes

1. TED now does its own curation through Playlists, including ones from celebrities
2. I have acquired a list of candidates from a project assistant

Sample talk (Creativity group)

2.http://www.ted.com/talks/andy_hobsbawm_says_do_the_green_thing.html. Andy Hobsawm: "Do the green thing."

- length: 3:25
- overall speed (WPM): 135
- vocabulary profile: 3K-92.2%; 5K-95.1%; 10K-98.2%; OL-1.5%
- accent: British standard
- comments: “creativity” is repeated a number of times

TED Integration: 3 collections

- Positive response
  - Helpful
  - More support materials, especially key vocab
  - More needed/wanted
- More planned
  - Netflix collections;
  - Other sources: Stanford's ecorner; Google Tech Talks…

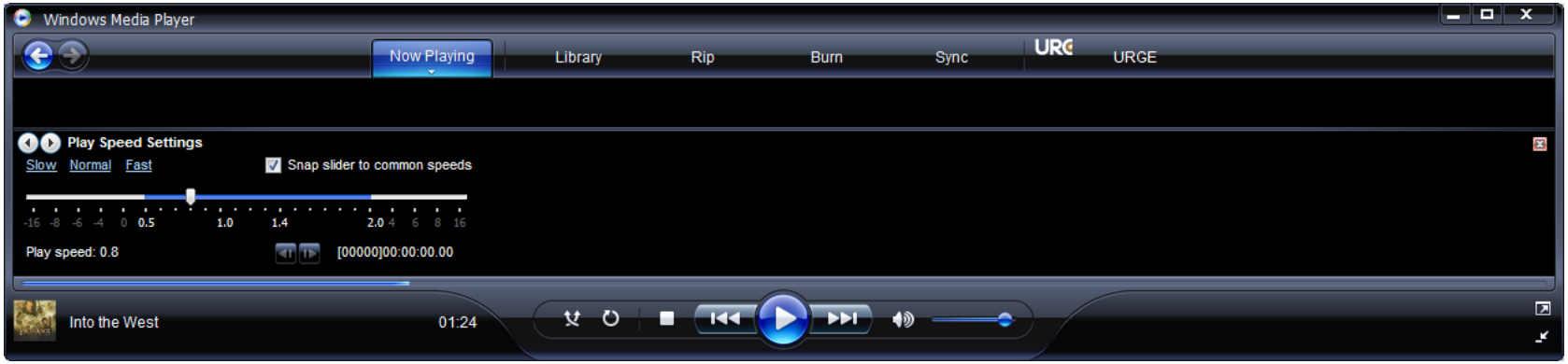
Related examples

- CLILSTORE Project: audio/video texts are collected and organized by CEF levels and provided transcripts are hyperlinked to various mono and bilingual dictionaries. Exercises are provided using Hot Potatoes. http://multidict.net/clilstore/
- Ayamel: Open source version of Brigham Young University's Flagship Media Project—system for cataloging and sharing authentic media. http://arclite.byu.edu/fml/index.php?title=Ayamel
- Lingle indexes according to CEF levels: http://blog.lingleonline.com/new-features-cefr/

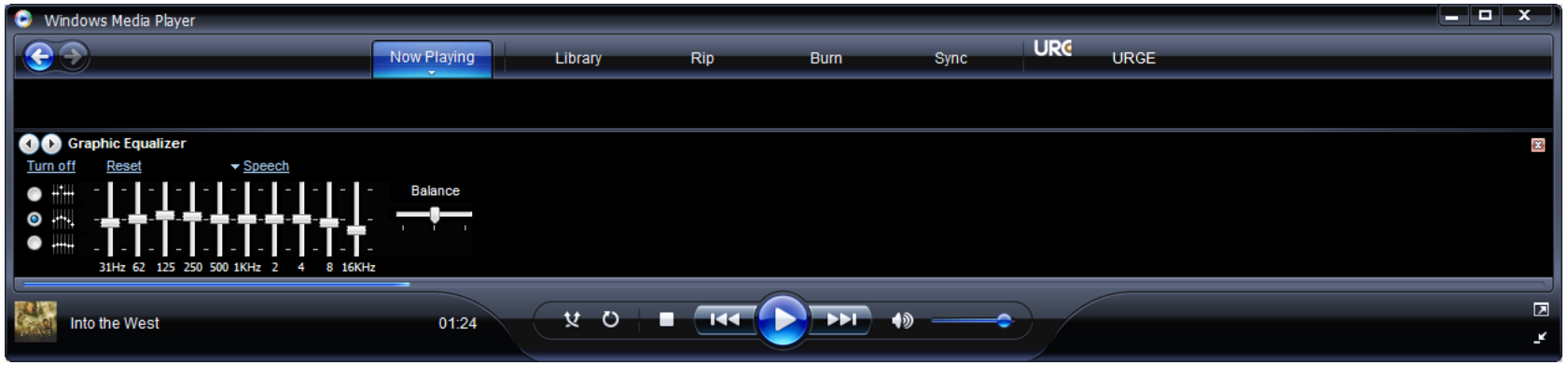
Online tools and resources

- Text support
  - Transcripts
  - Captions/subtitles
- Online glossing and dictionaries
- Media players (try www.videolan.org/vlc/)
  - Playbar/pause/jump controls
  - Play speed
  - Graphic equalizers

Windows Media Player



Play Speed Control (80% normal)



Graphic Equalizer, optimized for speech

SLA Theory and Computer-Mediated Listening

Chapelle (2003): Links CALL with SLA

- Extends human-human theories (interactionist, sociocultural, and depth of processing) to human-computer
- Input enhancement
  - Salience (e.g., highlighting, repetition)
  - Input modification (glossing/dictionaries, text support, translation)
  - Elaboration

Multimedia model

Plass & Jones (Jones 2006)

- Blend of Mayer's Cognitive Theory of Multimedia and Interactionist Perspective of SLA
- Links principles of Mayer with SLA; e.g., contiguity principle

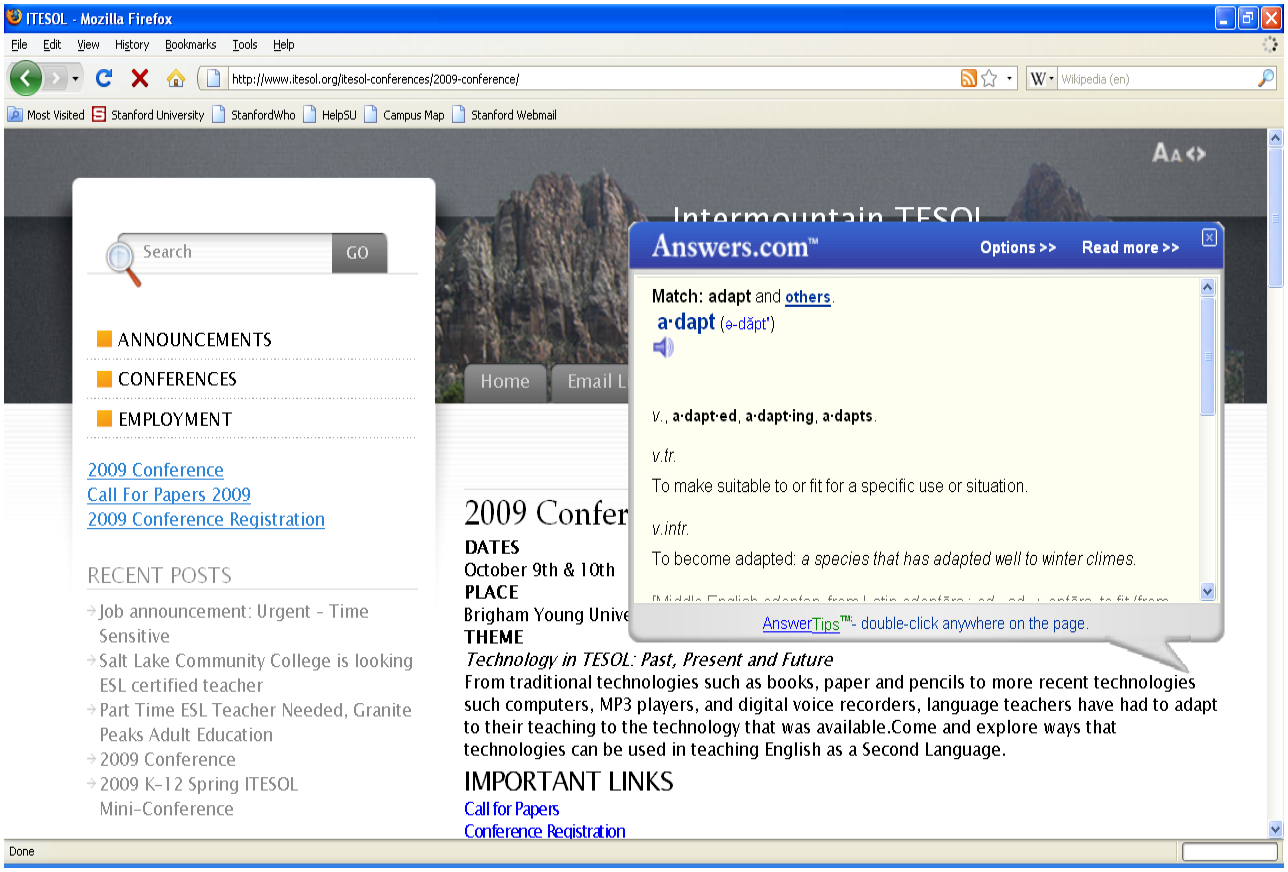
Research Directions

- Text support: captions/subtitles
  - Captions are generally helpful for comprehension & vocabulary (Vandergrift & Goh 2012)
  - Individual control better than teacher or program control (Danan 2004)
- Text support: transcripts
  - Students use them when present (Liou 1997)
  - Students prefer captioning (Grgurovic & Hegelheimer 2007)

Research Directions

- Glossing: links to transcript
  - Pictorial & text about equal (Jones 2004)
  - Text & picture beats text only (Chun & Plass 1996)
  - Video glossing sometimes better, sometimes not (Al-Seghayer 2001; Plass et al. 1998)
  - Text glossing may be better for subsequent production (Jones 2004)
- Online dictionaries linked to listening transcripts: not well-studied yet

Instant online dictionary



Answers plug-in for Firefox: http://www.answers.com/main/firefox_plugins.jsp

See also WordWeb and built-in function for Safari on Macs

Research Directions

- Speech rate
  - Early studies showed no consistent advantage for slowed speech (Blau 1990; Rader 1991 (cited in Zhao 1997)
  - Some advantages depending on speed selected (McBride 2007)
  - Significant advantage if learner-controlled (Zhao 1997)
- Room for additional research and development on effective use of *all* these

Simple Listening Model

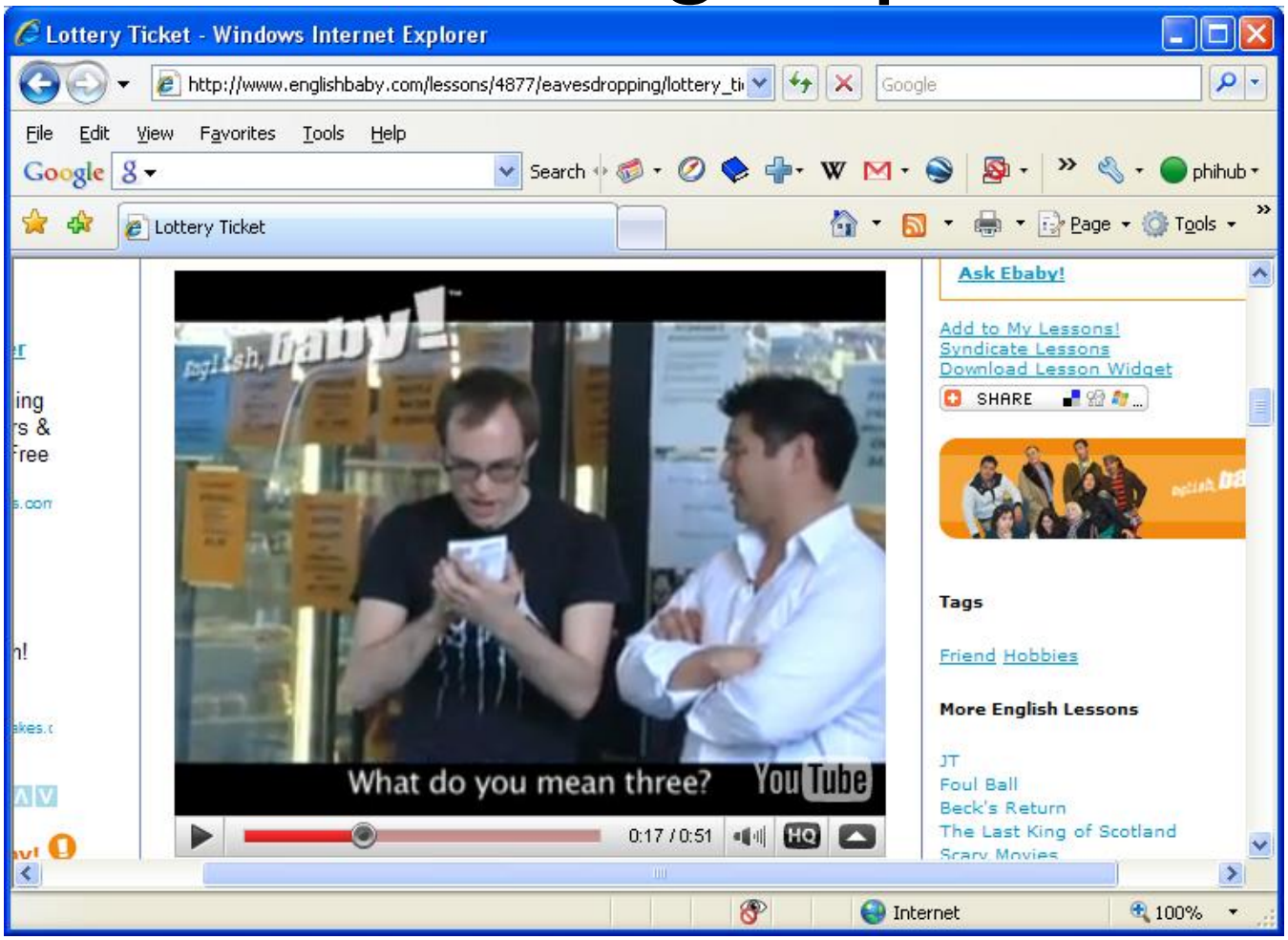
Objectives of directed listening activities

- Improve comprehension
- Increase language knowledge
  - Phonological
  - Lexical
  - Grammatical
  - Discourse
- Improve processing speed, capacity, and accuracy

Working with dedicated sites

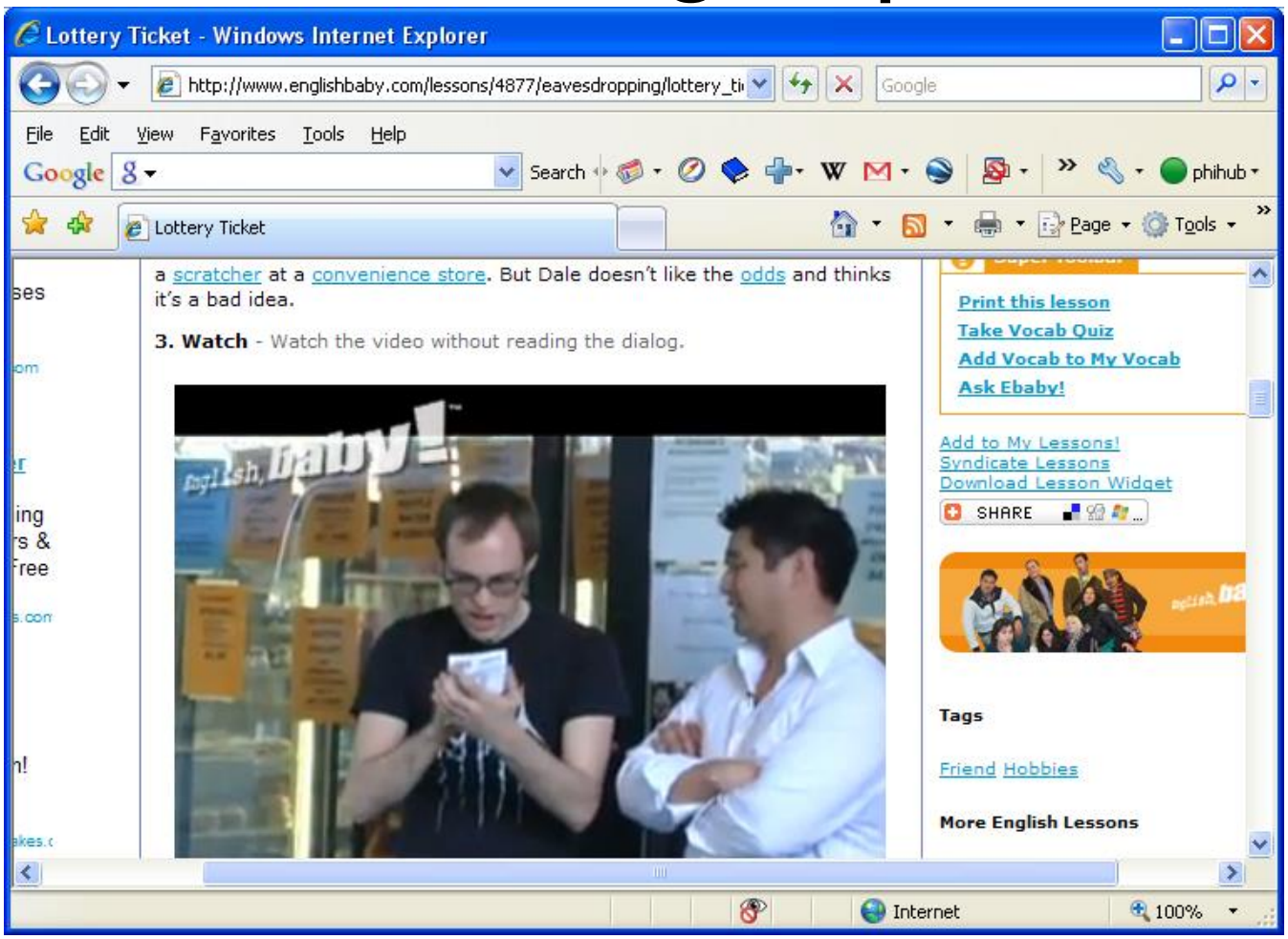
- Typical lesson structure
- Or, change programmed order
- Hide choices on MC questions
- Slide window down to hide captions
- Use for dictation (oral or written)
- Main point: Teachers & students can exploit material to suit different objectives

Hiding captions



www.englishbaby.com

Hiding captions



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Changing Roles

- Developer Roles
- Teacher Roles
- Learner Roles

Developer Role

- Consider SLA research-based guidelines
- Lead learners to most promising paths (figure them out first)
- Offer *useful* functionality
  - Longer playbars
  - “Back 2 seconds” button
  - Variable pauses (no one has done this yet)
  - Speech rate control
- Provide integrated learner training

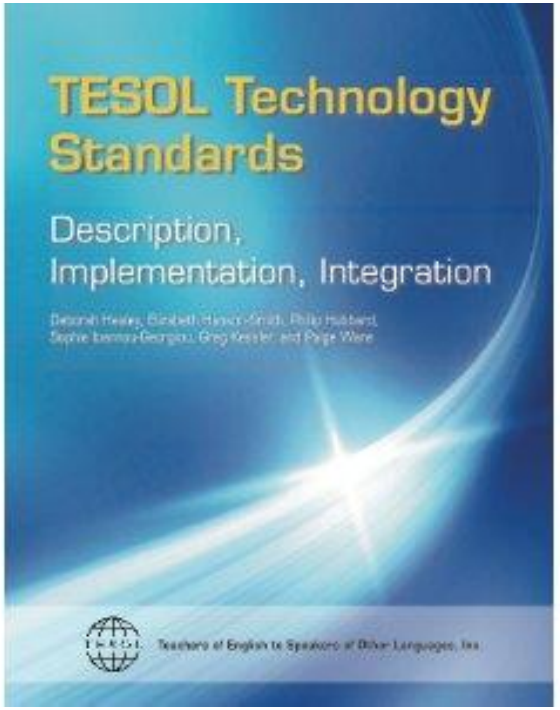
Teacher Role

- Curate material wisely
- Discover/develop and model effective strategies & train students in their use
- Releasing control to students while finding ways to hold them accountable
- Preparing students for that control

Teachers & Students

TESOL Technology Standards: Design, Implementation, Integration (2011)

- Learner Standards, Goal 3
  - Language learners effectively use and critically evaluate technology-based tools as aids in the development of their language learning competence as part of formal instruction *and for further learning*.



Changing Student Role

- Understand how to set objectives
- Know what's allowed by the application
- Distinguish listening for comprehension from listening for language learning
- Learn to effectively use
  - Media player controls
  - Meaning technologies of all types
- Basically, *develop autonomy*

Learner training

- Even advanced students need direction
  - Technical training – how
  - Strategic training – what & when
  - Pedagogical training – why
- Training occurs through
  - Class modeling
  - Student exploration; collaborative debriefings
  - 1-1 meetings

See www.stanford.edu/~edfs/callcourse/CALL7.pdf

Closing Comments

- We truly are in a golden age for listening, but we aren't doing enough with it yet
- We need to study and understand
  - Content curation and systemization
  - New roles for developers
  - New roles for teachers
  - New roles for learners

PP: **http://www.stanford.edu/~efs/UO-2014.pdf**

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