

Using Video to Communicate Scientific Findings: Habitat Connections in Urban Streams

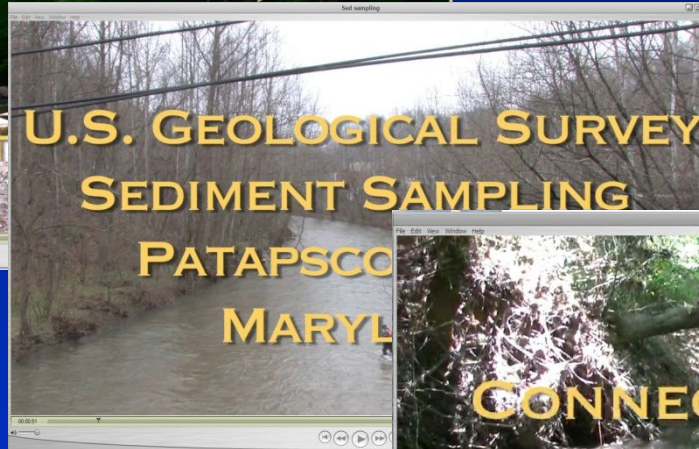
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Gerard McMahon



Objectives:

1. Show the Habitat Connections film and web site
2. Recognize the importance of video in science communication
3. Get feedback on film - Survey and discussion.

U. S. Geological Survey N.C. Water Science Center Films



<http://nc.water.usgs.gov/albe/video/habitat>

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Habitat Connections

An important component of the national USGS EUSE (Effects of Urbanization on Stream Ecosystems) study was to assess effects of urbanization on stream habitat.

With urbanization, streams change. Urbanization changes stream hydrology, water quality, physical habitat with profound effects on aquatic ecology. Understanding these changes helps water-resource managers to protect and restore stream ecosystems.

People are connecting with their streams, and connecting with each other to protect these streams.

In urban areas across the county, people are working hard to restore and improve habitat in urban streams.



Connecting People and Urban Streams

Faith Fitzpatrick (U.S. Geological Survey) outlines the importance of habitat to the health of streams and shows examples of connecting people to urban streams through rehabilitation efforts across the USA. (5 minute version)

5:31 minutes

Location: North Carolina, Maryland, Wisconsin, Oregon

Date: November 2010 - May 2011

[View Transcript](#) · [View Metadata](#)



Connecting People and Urban Streams

Faith Fitzpatrick (U.S. Geological Survey) describes how urban development affects aquatic habitat in streams, and how stream rehabilitation efforts across the USA are improving urban stream habitat and improving people's connection to their urban streams.

19:24 minutes

Location: North Carolina, Maryland, Wisconsin, Oregon

Date: November 2010 - May 2011

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More Habitat Connection Videos

Watch more videos showing examples of stream restoration and revitalization projects from three areas in the US:

[Portland, Oregon](#),
[Milwaukee, Wisconsin](#), and
[Baltimore Maryland](#)

Video is the new writing: Are you literate?

Dr. Matthew Vonk writing on how he uses video in his university physics classes (Physics Today, 1-11-2012):

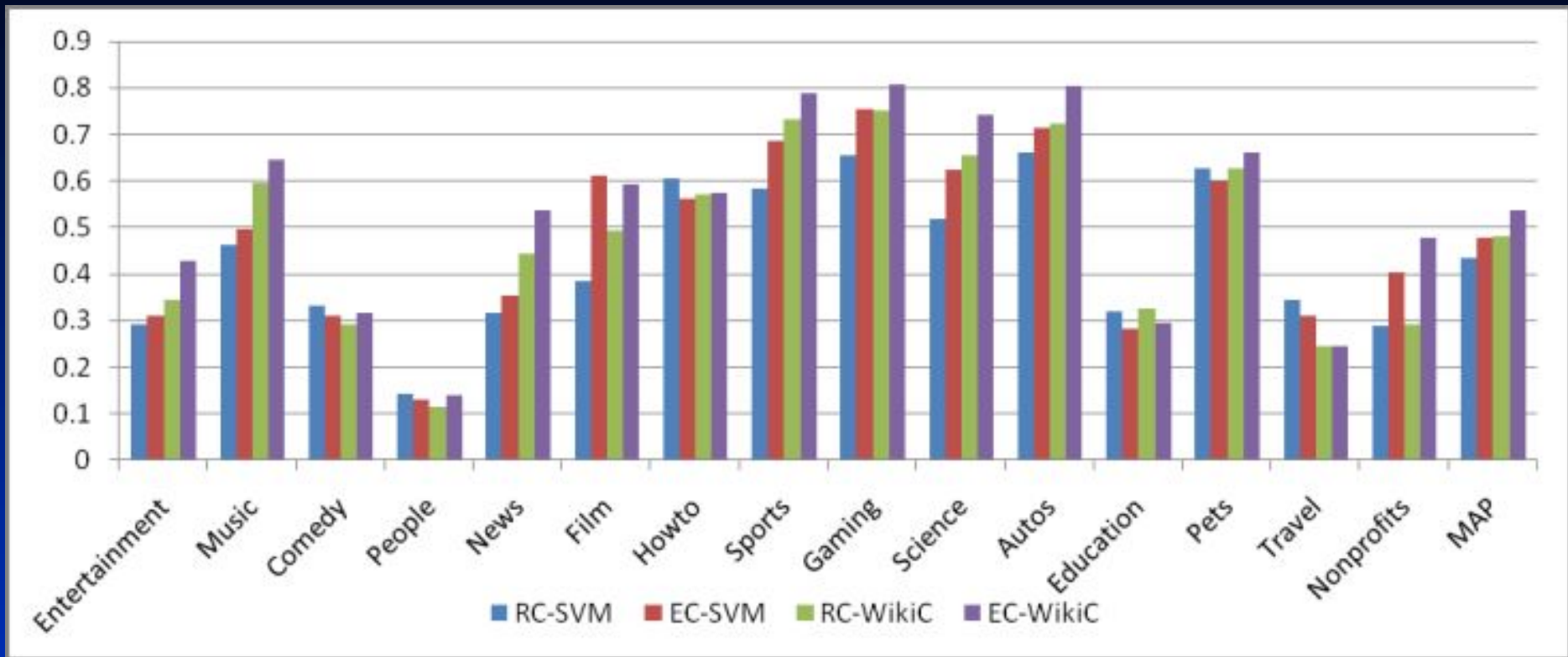
“With the digital revolution we find video oozing into almost every capillary niche that writing has evolved for itself....

Like it or not, we seem to be using video in almost exactly the same way that we have used writing...

We are not far from the time when recording will join the other three Rs taught in grade school... What I wonder is how we, as educators, can harness that power and best exploit the innate advantages that video has over writing.”

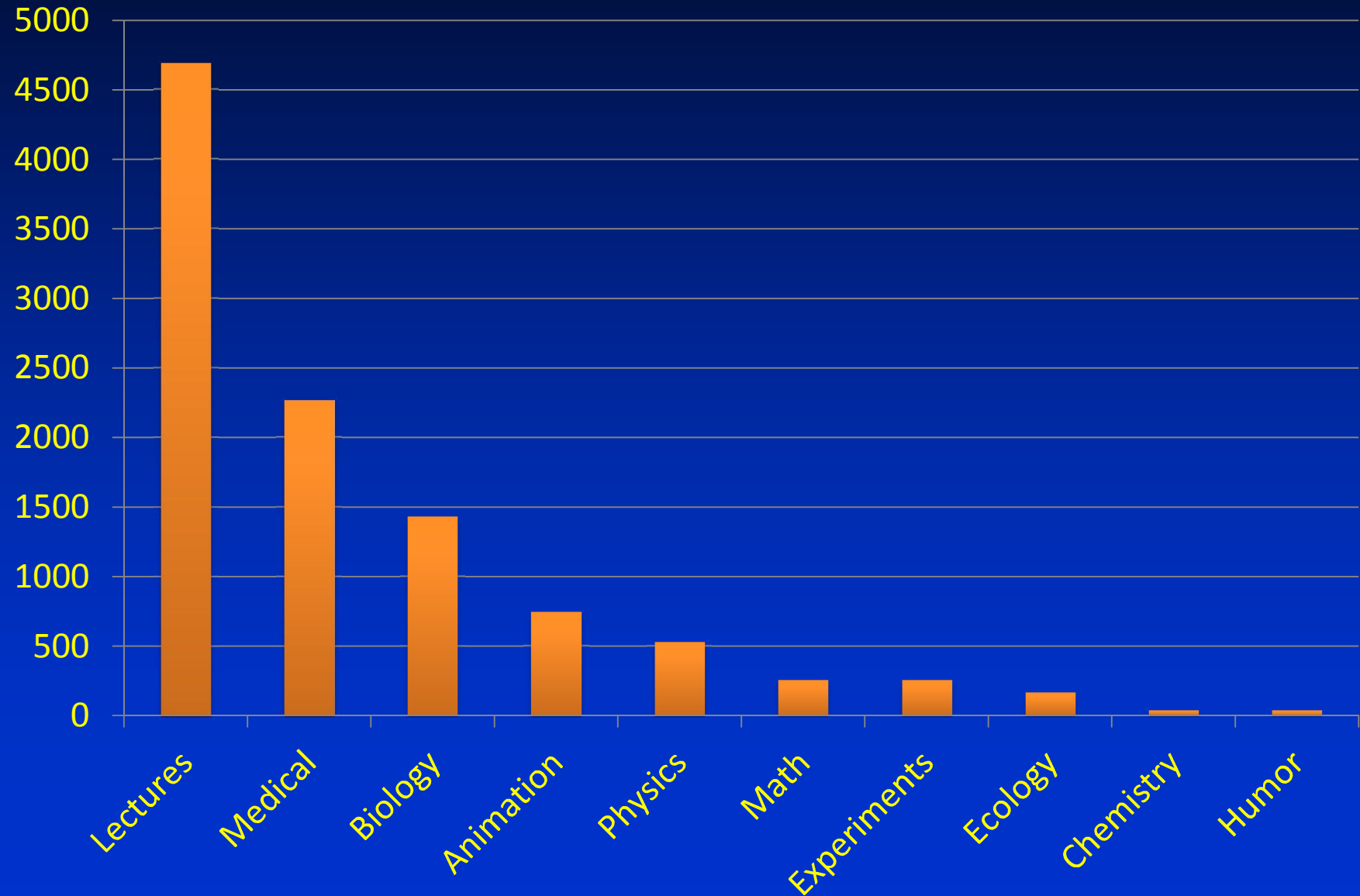


<http://nc.water.usgs.gov/albe/video/habitat>



“Web Video Categorization based on Wikipedia Categories and Content-Duplicated Open Resources” Zhineng Chen, Juan Cao, Yicheng Song, Yongdong Zhang, Jintao Li, 2011

Number of Science Videos on DNAtube.com



Science Communication With Video

- Boffo beginning with main points.
- Know your topic.
- Know your audience.
- Show rather than tell.
- Try everything. Take risks.
- Make several versions for different audiences.
- Boffo ending with main points.



<http://nc.water.usgs.gov/albe/video/habitat>

Is the camera mightier than the pen?



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Elements of Filmmaking

PRODUCTION

CAMERA

CINEMATOGRAPHY

DIRECTION

SOUND

EDITING

FILM RELEASE



<http://nc.water.usgs.gov/albe/video/habitat>

PRODUCTION / WRITING

- Find a producer who is obsessed.
- Find a filmmaker with mastery of the technology.
- Script: Planning, visualization, structure, words.
- Two minutes per script page screen time.
- Two hours per page filming time.
- Get releases.



<http://nc.water.usgs.gov/albe/video/habitat>

CAMERA

- Check lens for dirt, focus.
- Manual focus for close ups.
- Get the wide shot.
- Use a tripod.
- Don't zoom.
- Don't pan.
- 30 seconds minimum per shot.



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CINEMATOGRAPHY

- 2/3 rule.
- Not. Too. Close.
- Look at the whole frame.
- Anticipate movement.
- Make your actors look good.
- Lighting.



<http://nc.water.usgs.gov/albe/video/habitat>

DIRECTION

- See the film in your mind.
- Film to edit.
- Watch for the moment.
- Make it failsafe. Use 3 or 4 cameras / takes.
- Do no one harm, show real people.
- Be invisible.



<http://nc.water.usgs.gov/albe/video/habitat>

SOUND

- Get the microphone off the camera.
- Listen for background noise.
- Muff wind noise.
- Turn off your cell phone.
- Put the car keys in the refrigerator.



<http://nc.water.usgs.gov/albe/video/habitat>

EDITING

- See the film in your mind.
- 10 to 1 ratio.
- Organize, digest, eureka.
- Cut long, then short.
- Cut out non-video.
- Avoid music unless released.



<http://nc.water.usgs.gov/albe/video/habitat>

FILM RELEASE

- Promote.
- Show under the best conditions.
- Get audience feedback. Learn.
- Learn from the Web statistics.
- Make the next film- You get better.



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Survey Says: Important Film Elements

- Short- 5 minutes, and 12 minutes.
- Strong visuals.
- Engaging story.
- Simple take-home message.
- Clear.
- Believable.
- Solid science.



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