Size Matters: Research on Small-screen Learning

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A Brief History of Size
Screen Size
Back in the stone age, this is all we had...

... and it was HEAVY
The 1st Commercial TV Camera
It was black and white

Doesn’t look too much different from the Flintstones TV!
And it weighed about as much!
And we got to this...

Hey! Isn’t that screen about the same size as an iPad mini???
In the 1950s we got color cameras.

They cost over $75,000... Without any lenses.
And you couldn’t even think about picking one up!

And TV sets! Now about the size as a 12” iPad Pro.
One of the first portable Video cameras

This is the recording deck

It cost somewhere North of $100,000

It still used a tube to capture images
By the 1990s...

We had CRT monitors.

What's a CRT???

Monitors only came in a few sizes. 12”, 15”, 17” and a whopping 21”
- They were heavy.
- They fatigued the eyes in strange ways.
- They didn’t have very good color gamut...like NTSC color TV.

Now we have screens made little, microscopic, infinitesimal, eensy weensy pixels that come smaller and smaller every year. of LCD, Plasma and OLED discrete elements.

They come in a staggeringly wide variety of sizes.
By the 2000s... There were pixels.

Now we have screens made little, microscopic, infinitesimal, eensy weensy pixels that are made smaller and smaller every year. The next big thing will be...

HDR TV

Today, screens come in a staggeringly wide variety of sizes, resolutions and gamuts.
Skip everything else!
We got to the laptop or the pocket video studio we ALL have!
You have to stop thinking about video as being just video, but also...

...the screen size the viewer is likely to see your video.
Does screen size matter?????

Well...yes (sounds like kind of a duh)

And...no.
What are you showing?

- Talking head—does screen size matter?
- Words on a slide—does screen size matter?
- How to on machinery—does screen size matter?
- Use of safety equipment—does screen size matter?
- Dramatic scenes like how to deal with trauma in the workplace—does screen size matter?
- Landscape shots—does screen size matter?
Talking head
In order to show how words work on a slide we're going to
• Bulletize
• Rubber
• Baby
• Buggy
• Bumpers
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Words on a slide

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The written word doesn’t come easily to humans. As children learn to read, they have to knit together a few regions of their brains; language, vision and motor skills (as applied to vision).

As the silent movies showed us, there’s a lot more to vision then meets the eye or ear.
How to do something
How to use something—like safety equipment
And here’s a video...
Dramatic scenes
Landscape scenes

Why you might need to show something like this is beyond me, but hey...it happens.
What does the research show?

Starting in the 1990s (yes, that far back) there has been considerable research about what screen size does to **perception, attention and retention** of what is viewed on the screen.

- The evidence pretty clearly shows that for words to have immediate and rapid impact, the screen needs to be larger.
- If you’re showing a how-to type of video, screen size matters. The viewer needs to be able to see what is happening on the screen.
- For talking heads, drama and scenery screen size doesn’t matter as much. We get the information we need from what we hear and only a little from what we see (which also emphasizes the need for a great soundtrack).
- There is no difference in the cognition on screen size, just the amount of time it takes to understand what the words mean.
Some conclusions
Some general rules about screen size

1. Think about what screen your learning audience will be using
2. What is it that you’re showing
3. Don’t show it vertically
4. Don’t put too many words on a screen, especially if the learning might be viewed on a phone

Some general rules about how to think about video

1. How complex is your sequence?
2. What is it that you’re showing...is it important to the learning audience to see every little thing
3. Don’t shoot it vertically
4. Don’t put too many words on a screen, especially if the learning might be viewed on a phone
Thank you!

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