What is eGlass?
What can you do with eGlass?
You can

• Record video for asynchronous instruction
You can

• Use Zoom/Teams for synchronous instruction
You can

• Overlay media and applications (images, PPT, word, PDF, excel, web browser, etc.)
You can

• Removes the background from your content
You can

• Take SnapShots
You can

• Flip image
You can

• Zoom in and out
You can

• Annotate
What are the benefits of using eGlass?
Challenges

Source: A Serious Man, 2009, by Joel Coen and Ethan Coen
Camtasia workshop

Camtasia is a beginner-friendly video editor suitable for instructional video creation. Any U of I faculty and staff who assist in creating instructional material for courses can install and use Camtasia for free. This workshop will cover the essentials of video editing and instructional video production. Participants will learn how to use Camtasia to edit Zoom/Teams lecture recordings, record a PowerPoint slide show with narration, create screencast tutorial videos, and create interactive videos.
Students prefer*

• Shorter videos
• Instructor’s talking head
• Instructor drawing freehand


eGlass allows you to

• Maintain eye contact with students
eGlass allows you to

• Not have the writings and drawings obscured by your head or body
eGlass allows you to

• Capture facial expressions, gaze, gestures, and body language along with the writing

Source: https://youtu.be/AnLnSV6ce8I
eGlass allows you to

• Deliver effective instruction that students would respond positively

Sample research on the effectiveness of eGlass-type videos
What are some examples of using eGlass for instruction?
Spinning Room Ride

Side View

Static Friction $f_s = \mu_s N$

Newton's 2nd

$\Sigma F_r = \frac{mv^2}{r}$

$N = \frac{mv^2}{R}$

$2F_y = ma_y$

$f_s - mg = 0$

$f_s = mg$

Question: What is the slowest $V$? (without slipping)

Source: https://youtu.be/h53Vu3BefaQ
The Kettlebell Swing

Silverback Stance

Hike

Wet Towel Snap

Float
For the third tone, stop at the lowest point of your voice.
Elastic Potential Energy

\[ E_{\text{me}} = U_g + U_e + K \]

\[ U_{g,2} + U_{e,2} + K_2 = U_{g,1} + U_{e,1} + K_1 \]
Extruder Example Problem

- Extruder has a barrel diameter of 100 mm. The screw rotates at 100 rpm, has a channel depth $H = 6$ mm, and a flight angle $\theta = 17.5^\circ$. The extruder makes round polyethylene solid rod, and the extrusion temperature is 250°C. The viscosity $\eta = 80 \text{ Ns/m}^2$.

a) What is the highest flow rate achievable?

b) If the extruder is 2.5 m long, and the die has a length of 1 mm and diameter of 5 mm, what is the flow rate? What if the die diameter is 10 mm?

Source: https://youtu.be/86BOOycBLbs
a) \[ Q_d = \frac{\pi^2 D^2 H N \sin \theta \cos \theta}{2}, \quad Q_p = 0 \]

\[ Q_d = \pi^2 (100 \text{ mm})^2 (6 \text{ mm})(100 \text{ rev/min})(\sin 17.5^\circ)(\cos 17.5^\circ)(0.5) \]

\[ Q_d = 8.49 \times 10^6 \text{ mm}^3/\text{min} \]

b) \[ Q_{\text{total}} = Q_d - \frac{\pi CD H^3 \sin^2 \theta}{12 \eta l} = 0.00849 \text{ m}^3/\text{min} - 1.53 \times 10^{-10} \text{ m}^3/\text{N-min} \]

\[ \text{Die Characteristic} \]

\[ Q = Kp = \frac{\pi D^4}{128 \eta l_d} P = 1.15 \times 10^{-8} \text{ m}^5/\text{N-min} \]

Source: https://youtu.be/86BOOycBLbs
What are some best practices* of using eGlass?

Schmid, Kristina; McCandless, Peter; and Gomez, Eddie, "Dynamic Lightboard Videos" (2019). UNLV Best Teaching Practices Expo. 77. https://digitalscholarship.unlv.edu/btp_expo/77
Tips from the experts

• Use color to display concepts.
Tips from the experts

• Do not try to write everything down in real time.
Tips from the experts

• Plan your talk before the recording session begins.
Tips from the experts

• Look into the camera often as if students are present and watching
Tips from the experts

• Five minutes! One topic, one board, stop.
Tips from the experts

• Pause before starting. Look at the camera.
Tips from the experts

• Wear dark clothing. No text or logo on your shirt.
Tips from the experts

• During filming, look at what you are writing while you are writing it.
Tips from the experts

• Don’t strive for perfection. Good enough is good enough.
Questions?