What's your story? Using storytelling to propel engineering education research

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Workshop activities

- ▶ Doing storytelling
- ▶ Improving storytelling
- ▶ Appreciating storytelling

Doing storytelling

- Getting some material
  - Think about a story related to some aspect of the research that brought you here (e.g., the origin story of the research, a success or challenge of the grant, anything…)
  - Free write/draw for 3 minutes
- Sharing your story
  - Find a partner
  - Share your stories
  - Time permitting, what did you like about each others' stories
- Transition
  - How can we get even better at storytelling – more intentional stories, more impactful stories, …

My Story
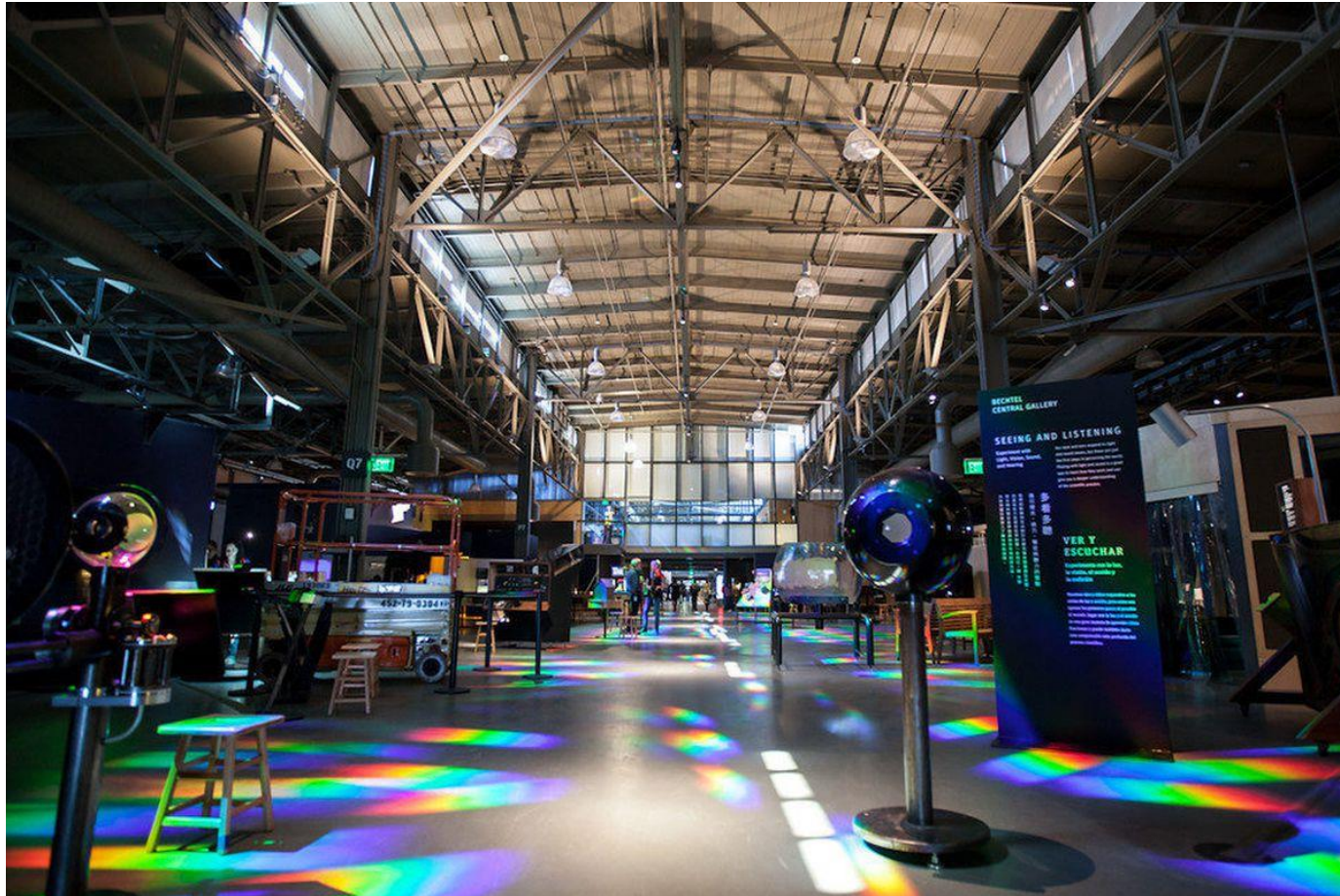
What was the difference between my bio ("what" story) you heard and the "why" story I just told you?

Messaging is a science.

- Best practices are research based.

- It is a skill. Practice it.

- Like teaching, it is also an art.

Why message?

- You wish to implement change.

- The power to create change lies with someone else.

"People don't buy what you do, they buy why you do it." -Simon Sinek

Theory of Change

- What do you want to change?

- Who has the power to change it?

- How does the action you will take create the change you want to see?

Using story to communicate your message

Your personal story

Connect your story to one of the key messages

A specific ask
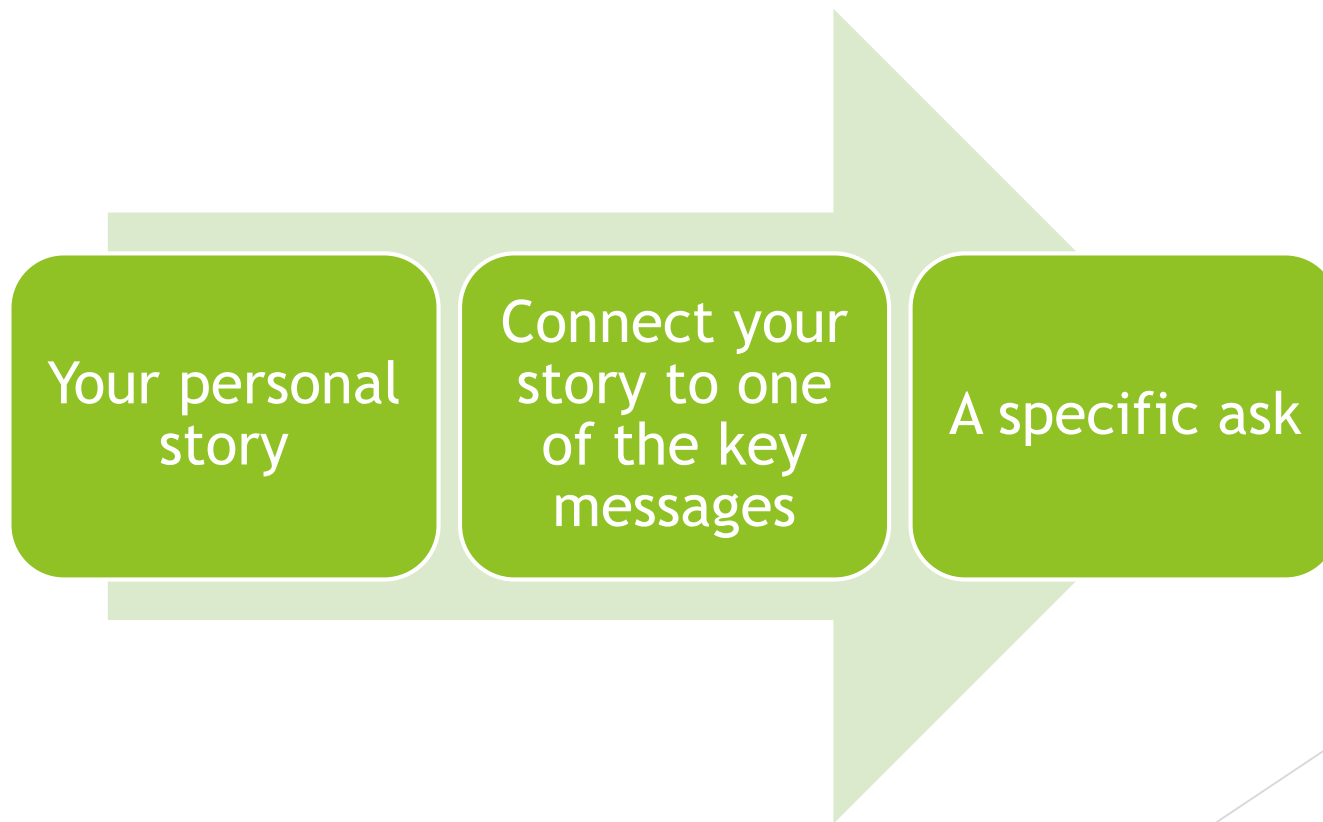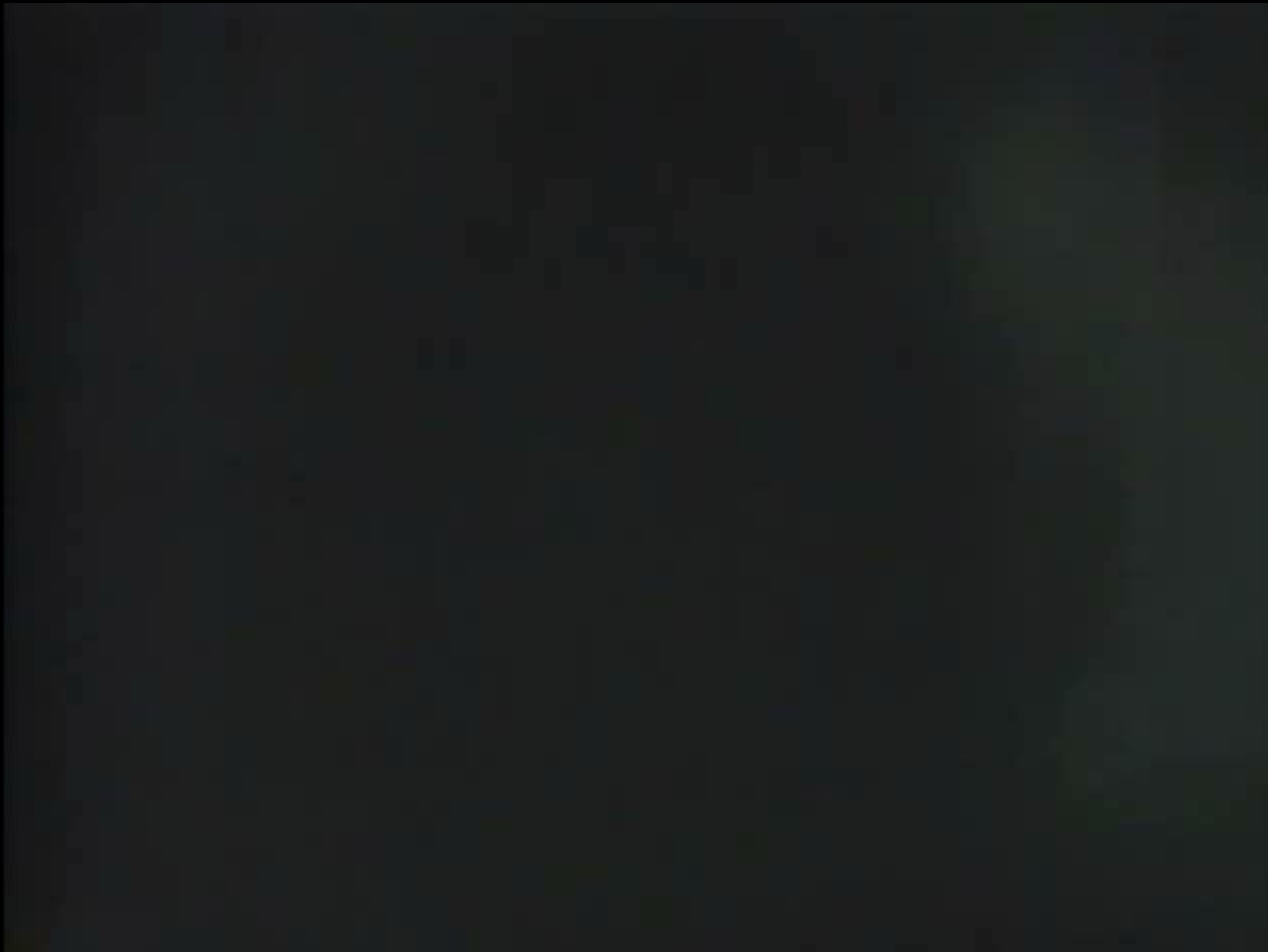
What is the personality of the big triangle?
Heider-Simmel Illusion published 1944

"For sale, baby shoes, never worn."

CIVIL ENGINEERING FLOW CHART (2014 - 2015)

Freshman		Sophomore		Junior		Summer	Senior	
Fall	Spring	Fall	Spring	Fall	Spring	Summer	Fall	Spring

CGN 3322C — Geomatics

TTE 4004 — Trans. Eng.

STA 3032 — Prob. & Stat.

Technical Elective

Technical Elective

Technical Elective

Technical Elective

Technical Elective

MAC 2311

MAC 2312

MAC 2313

MAP 2302

CWR 3561 — Num. Meth. & Comput. in CE

CGN 3501C — CE Materials

EGN 1001C — Intro to Eng I

CES 3104 — Mech. of Mat. "or"

CES 3100 — Analysis of Str.

CES 4702C — Reinf. Conc.

CGN 4151 — Eng. Mgmt.

EGN 3311 — Statics

EGN 3331 — Str. of Mat.

CEG 3011C — Geo. Eng.

CGN 4803 — Sr. Design I

CGN 4804 — Sr. Design II

PHY 2048L

PLUS MAC2312

PHY 2049L

EGN 3321 — Dynamics

CWR 3201 — Fluid Mech.

CHM 2045C

ENV 3001C — Env. Eng.

PLUS MAC2312

CWR 4202C — Hydr. Eng.

CWR 4001 — P. & C. Eng.

CGN 4935 — FE Seminar

Gen. Ed.

Gen. Ed.

ENC 1143

ENC 1101

ENC 2463

Gen. Ed.

Natural Science Elective

Gen. Ed.

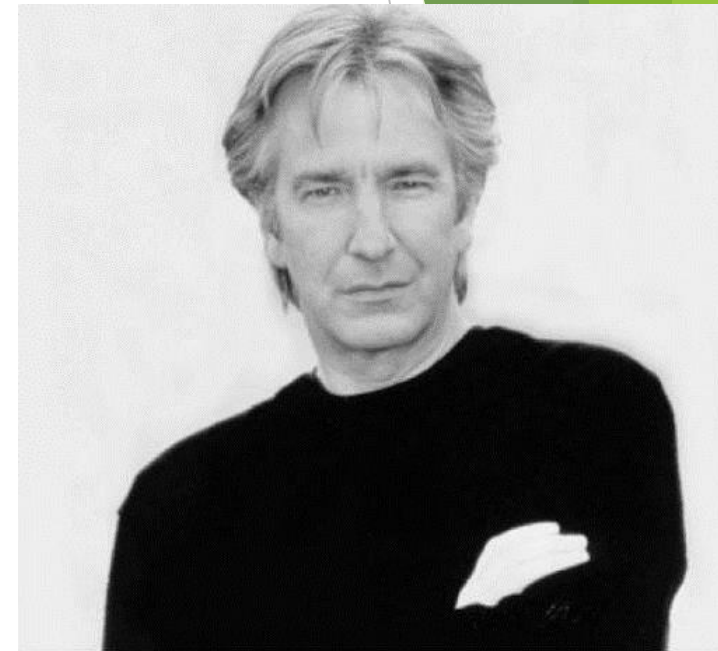Gen. Ed.

Stories have an underlying structure

Characters in Action with specific Intentions in Settings

using particular Means

Stories arise through **tensions** between these elements such as when means do not support actions or characters' intentions do not align.
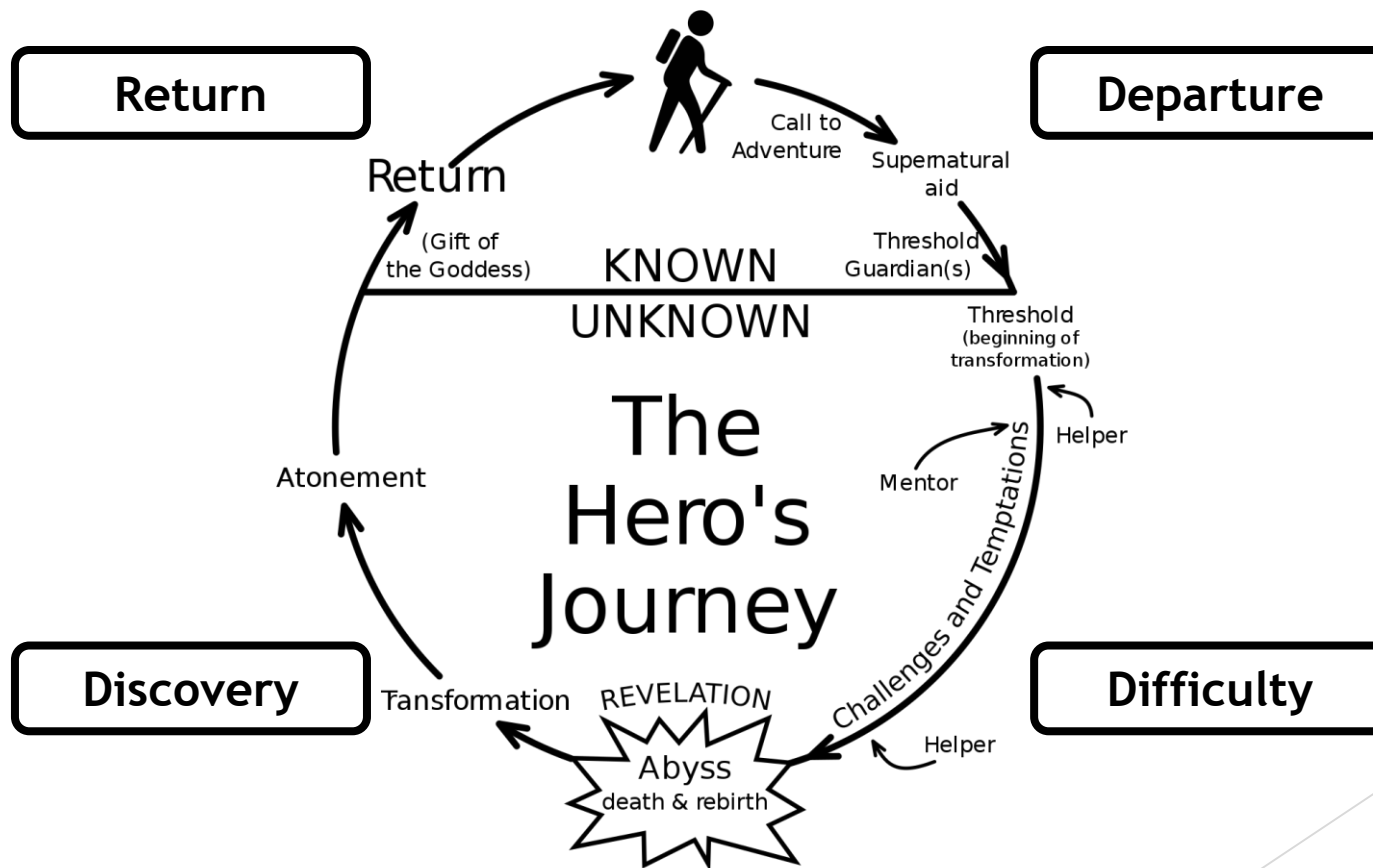

"And it's a human need to be told stories. The more we're governed by idiots and have no control over our destinies, the more we need to tell stories to each other about who we are, why we are, where we come from, and what might be possible."
-Alan Rickman

Bruner, J. (1987). *Actual Minds, Possible Worlds*. Cambridge, MA: Harvard University Press.

Story Structures

Story Structures: Hero's Journey

Return

Departure

Discovery

Difficulty

Return

Call to Adventure

Supernatural aid

(Gift of the Goddess)

Threshold Guardian(s)

KNOWN

UNKNOWN

Threshold (beginning of transformation)

Atonement

Helper

Mentor

Challenges and Temptations

The Hero's Journey

Atonement

Tansformation

REVELATION

Abyss death & rebirth

Helper

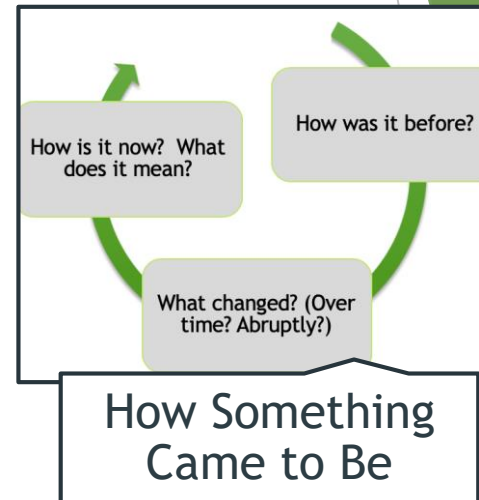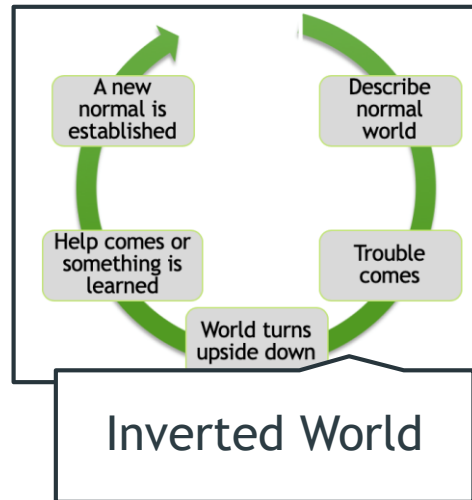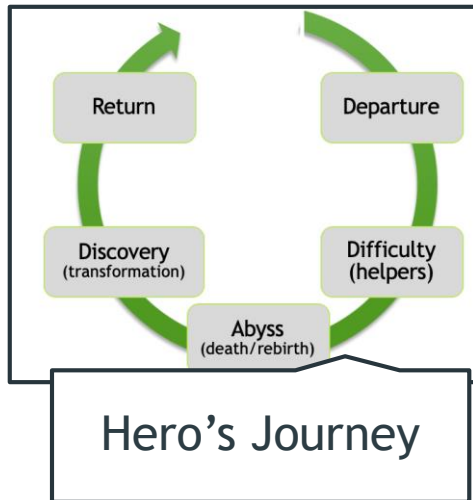Campbell, J. (2008). The Hero with a Thousand Faces (Third Edition). Novato, CA: New World Library.

Story Structures: Simplified

- Basic story structure
    - Beginning (set the context – the place, participants, time)
    - Middle (describe the action – what happened, what problem is addressed, what changes occur)
    - End (provide the resolution – growth achieved, wisdom gained, problem solved)

- Five Ps
    - People, Place, Problem, Progress, Point

Story Structures: Simplified

- Inverted world
    - Describe the normal world
    - Trouble comes
    - The world turns upside down
    - Help comes or something is learned
    - A new normal is established

- How something came to be
    - How was it before?
    - What changed? Could be over time or abruptly
    - How is it now?
    - What does it mean?

http://vitalysthealth.org/wp-content/uploads/2018/08/Workbook-Storytelling.pdf

Which story structure resonates with you?

Hero's Journey
- Return
- Departure
- Difficulty (helpers)
- Abyss (death/rebirth)
- Discovery (transformation)

Inverted World
- A new normal is established
- Describe normal world
- Trouble comes
- World turns upside down
- Help comes or something is learned

How Something Came to Be
- How is it now? What does it mean?
- How was it before?
- What changed? (Over time? Abruptly?)

Basic Structure
- Beginning: Set context (place, participants, time)
- Middle: Describe action (what happened, what problem addressed, what changes occur)
- End: Provide the resolution (growth achieved, wisdom gained, problem solved)
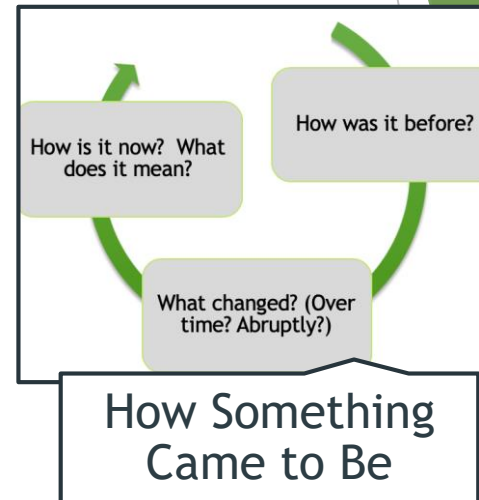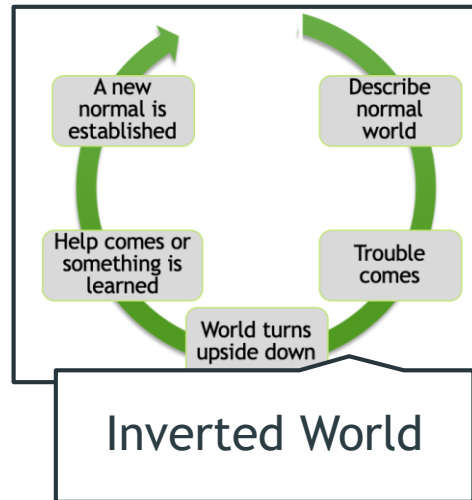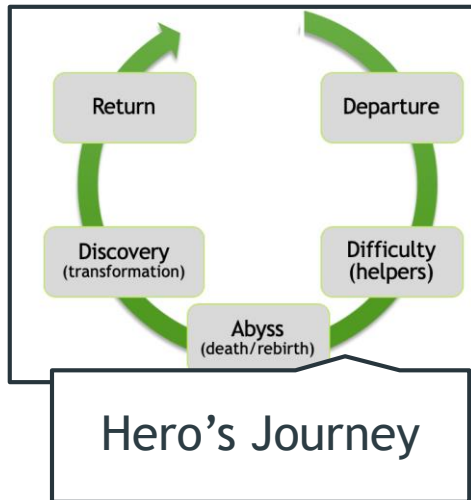
Characters in **Action** with specific **Intentions** in **Settings** using particular **Means**

Five Ps: People, Place, Problem, Progress, Point

Choose **one** and explore using it to **refine** your story...

Hero's Journey

- Return
- Departure
- Discovery (transformation)
- Difficulty (helpers)
- Abyss (death/rebirth)

Inverted World

- A new normal is established
- Describe normal world
- Help comes or something is learned
- Trouble comes
- World turns upside down

How Something Came to Be

- How is it now? What does it mean?
- How was it before?
- What changed? (Over time? Abruptly?)

Basic Structure

- **Beginning** Set context (place, participants, time)
- **End** Provide the resolution (growth achieved, wisdom gained, problem solved)
- **Middle** Describe action (what happened, what problem addressed, what changes occur)

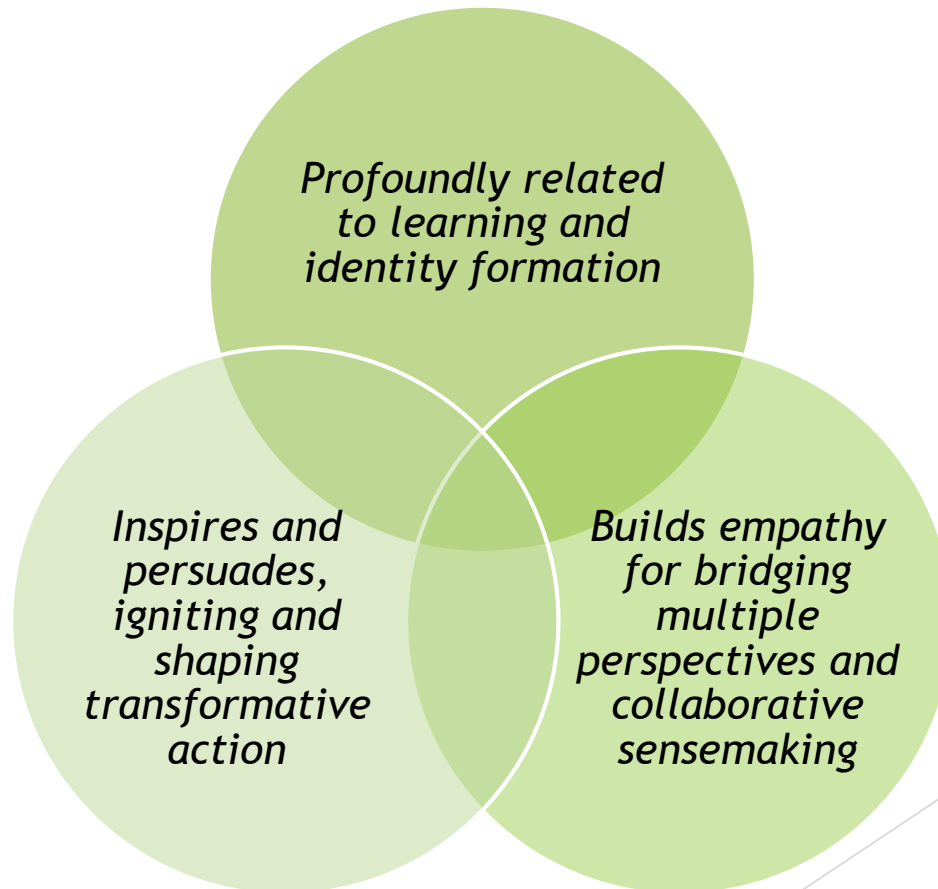**Characters** in **Action** with specific **Intentions** in **Settings** using particular **Means**

Five Ps: People, Place, Problem, Progress, Point

Appreciating storytelling

Stories and storytelling are <u>worthwhile</u> and <u>legitimate</u>!

Profoundly related to learning and identity formation

Inspires and persuades, igniting and shaping transformative action

Builds empathy for bridging multiple perspectives and collaborative sensemaking

Closing: 4+ word stories

- Channel your storytelling ability
- Take a minute, craft a 4+ word story
- Share!

Thank you!