


# How People Learn

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**Time Frame** 135 minutes

## Essential Question(s)

- How can authenticity be used to support how students learn?

## Summary

In this session, participants explore the Authenticity Framework and foundations for how people learn. The Authenticity Framework is a conceptual framework that promotes a meaningful, student-centered learning environment and encourages higher-order thinking. Participants will also explore excerpts from "How People Learn: Brain, Mind, Experience, and School" from the National Research Council.

## Learning Goals

- Engage in the experiences of how people learn.
- Identify key principles and practices of how people learn, including memory and learning, transfer of learning, cues and integration, and culture and context.
- Reflect on research related to how people learn and how it supports the Authenticity Framework.

## Standards

*InTASC Model Core Teaching Standards (K-12th)*

**1c:** The teacher collaborates with families, communities, colleagues, and other professionals to promote learner growth and development.
**1d:** The teacher understands how learning occurs-- how learners construct knowledge, acquire skills, and develop disciplined thinking processes--and knows how to use instructional strategies that promote student learning.
**1h:** The teacher respects learners' differing strengths and needs and is committed to using this information to further each learner's development.
**2g:** The teacher understands and identifies differences in approaches to learning and performance and knows how to design instruction that uses each learner's strengths to promote growth.
**2j:** The teacher understands that learners bring assets for learning based on their individual experiences, abilities, talents, prior learning, and peer and social group interactions, as well as language, culture, family, and community values.

## Attachments

- Authenticity Practicioners Brief – How People Learn.pdf
- Chat Stations Handout—How People Learn.docx
- Chat Stations Handout—How People Learn.pdf
- Chat Stations Instructions—How People Learn.docx
- Chat Stations Instructions—How People Learn.pdf
- HowPeopleLearnCartridge.imscc
- Instructional Strategy Note Catcher—How People Learn.docx
- Instructional Strategy Note Catcher—How People Learn.pdf
- Presentation Slides—How People Learn.pptx
- Triangle-Circle-Square—How People Learn.docx
- Triangle-Circle-Square—How People Learn.pdf

## Materials

- Presentation Slides (attached)
- Chat Stations Handout (attached, one per participant, print two-sided)
- Chat Stations Instructions (attached, one set, print)
- Instructional Strategy Note Catcher (attached, one per participant)
- Beach ball (one per group)
- Authenticity: Theory practitioner's brief (attached, one per participant, print two-sided)
- Laptop or tablet
- Triangle-Square-Circle handout (attached, one per participant)
- Three different colored highlighters (one set per participant)
- Paper (optional)
- Markers (optional)
- How People Learn Cartridge (attached, optional, Learning Management System file)

20 minutes

# Engage

**Facilitator's Note: Session Preparation**

Prior to the session, print out the **Chat Stations Instructions**. Create four stations by placing each page of instructions at a different location around the room. For large groups, create additional sets of stations as needed.

Use the attached **Presentation Slides** to guide this session. Begin by displaying the title slide and then continue to **slide 3** to introduce the Vision Board activity. Invite participants to create a vision board on the following prompt:

*What does your ideal classroom look like, sound like, and feel like?*

Explain that each participant will create a vision board illustrating their ideal classroom using the Looks Like, Sounds Like, Feels Like instructional strategy. Invite participants to use their own technology to create their boards or pass out paper and markers for them to use.

Start the 15-minute timer on the slide and allow participants time to complete the activity.

After time is up, display **slide 4** and invite participants to join in a Gallery Walk to see each others' vision boards. Ask participants to identify similarities and differences between their board and others' boards. Invite participants to consider which components they would like to add to their own classroom after viewing the work of their peers.

**Facilitator's Note: Digital Gallery Walk**

If participants created their vision boards on paper, ask them to walk around the room and look at the vision boards on the tables. If participants created virtual vision boards, you may consider a virtual Gallery Walk using a Google Slide deck.

45 minutes

# Explore

Display **slide 5** and introduce the essential question. Allow participants time to consider the question. Change to **slide 6** and introduce the learning objectives for the session.

Pass out a copy of the **Chat Stations Handout** to each participant. Organize the participants into four groups, each with between four and seven participants, and assign each group to a Chat Station. Each group will have a different page of instructions.

Display **slide 7** and instruct participants to read the provided instructions at their current station and respond to the questions for that station on their handouts. Explain that participants will have ten minutes at each station, and they will rotate stations when time is up.

Start the 10-minute timer on the slide. When the timer goes off, have participants rotate stations then restart the timer. Repeat the process until each group has visited each station. The activities for each station are listed below:

### Station One: Fish Is Fish

Participants watch and listen to the reading of *Fish Is Fish* by Leo Lionni and read the following statement based on research from *How People Learn*:

People use prior knowledge to make meaning of and to construct new knowledge (Bransford et al., 2000).

**Embedded video**
https://youtube.com/watch?v=cvp5FoINnnM

After watching the video, participants respond to the following prompts on their Chat Station Handouts:

- If you were the fish, what gaps would still exist in your understanding that would require explanation?
- What does the story of *Fish Is Fish* tell us about how students learn?
- How might research on prior knowledge impact our teaching practices?

Participants discuss the video and their answers to the prompt within their group.

### Station Two: Putting Students in Charge of Their Learning Journey

Participants watch Edutopia's video *Putting Students in Charge of Their Learning Journey* and read the following statement based on research from *How People Learn*:

Through learning experiences, students develop deeper conceptual understanding (Bransford et al., 2000).

**Embedded video**
https://youtube.com/watch?v=zx_5whBOiZ8

After watching the video, participants respond to the following prompts on their Chat Stations Handouts:

- What does the video tell us about how students learn?
- How does research about the introduction of experiences before concepts impact our teaching practices?

Participants discuss their responses to the prompts within their groups.

### Station Three: A Problem with Cottage Cheese

Participants respond to the following mathematical scenario on their Chat Stations Handouts:

- A cook has ⅔ of a cup of cottage cheese. He needs ¾ of this amount to use in his recipe.
- How can he get ¾ of the ⅔ cup of cottage cheese?

Participants will explain the steps they took and the logic they used to arrive at an answer. Be sure to emphasize that they should show how they solved the problem using whatever format makes the most sense to them (a drawing, a numbered list, etc.).

Participants discuss their responses to the prompts within their groups.

### Station Four: Inquiry Stations

Participants watch the Georgia Department of Education's *Inquiry Stations - Social Studies and ELA* and read the following statement based on research from *How People Learn*:

Learning takes place in a social context. Students learn through interactions with their teacher, peers, and others (Bransford et al., 2000).

**Embedded video**
https://youtube.com/watch?v=G3Bev-zgCuM

Have participants respond to the following prompts on their Chat Station Handouts:

- From 3:25 to 8:50 in the video, what does it look like, sound like, and feel like when students are learning in a social context?
- How does the research about the importance of peer learning impact our teaching practice?

Participants will discuss their responses to the prompt with the rest of the group.

Once participants have visited each station, they will return to their original seats. Ask participants to take a moment to reflect on their experience. Invite them to share out any observations or insights they gained from each station.

30 minutes

# Explain

Display **slide 8** and introduce the research behind the Authenticity Framework.

Display **slide 9** and highlight the key points about memory and learning. Explain that both learning and understanding involve connecting new and existing knowledge. Display **slide 10** and tell participants that deep memorization involves the reconstruction, and not just retrieval, of information. Explain that deep memorization allows learners to generalize, categorize, and solve problems.

Display **slide 11** and highlight key points about the transfer of learning. Explain that transfer relies on understanding rather than memorization. Explain that understanding involves the learner building a versatile network of knowledge. Display **slide 12** and further explain that effective learning experiences allow learners to build these knowledge structures and to elaborate on and apply pieces of knowledge.

Display **slide 13** and highlight key points about cues and integration. Explain that learners integrate knowledge based on their environment and that environmental cues affect the recall and processing of new information. Display **slide 14** and tell participants that classroom culture and interactions are key in the knowledge integration process.

Display **slide 15** and highlight key points about culture and context. Explain to participants that learning is shaped by cultural meaning and social interactions. Display **slide 16** and explain that learners gain unique knowledge from their different experiences. Furthermore, collaboration between learners in the classroom allows each individual to share their cultural and social experiences which promotes knowledge integration.

Transition to **slide 17** and introduce participants to the Beach Ball Talk and Toss strategy. Explain that participants should answer the question on the slide that corresponds to the color their right thumb lands on when they catch the ball. Read aloud the following questions from the slide:

- Which part(s) of your ideal classroom promote the principles of how people learn?
- What would you add to your ideal classroom to support a student-centered learning environment?
- At which station(s) did you recognize memory and learning? How?
- At which station(s) did you recognize the transfer of learning? How?
- At which station(s) did you recognize cues and integration? How?
- At which station(s) did you recognize culture and context? How?

Once the directions have been explained, organize participants into small, equal groups and give each group a beach ball. Invite each group to form a circle and gently toss the ball to each other. Participants will take turns answering questions as they catch the ball. Each group should continue to play until each participant has had a chance to respond.

After every participant has had the opportunity to answer a question, review the Beach Ball Talk and Toss strategy. Tell participants that this strategy is a fun, active way to keep students involved in the classroom and encourages students to engage in meaningful conversations.

**Facilitator's Note: Activity Modifications**

If you don't have access to a beach ball for the Beach Ball Talk and Toss activity, then you may consider introducing a modified version of the strategy. Modifications could be made using the following:

- A set of dice. Each question is assigned a number rather than a color and participants roll the dice to find out which question they will answer.
- Strips of construction paper. Cut strips of construction paper that correspond to the color of each question present on the slides. Place them in a cup. Ask participants to draw a strip and then answer the question that matches the color of their strip.
- Popsicle sticks. Color the ends of popsicle sticks to match the color of each question present on the slides. Place them in a cup. Ask participants to draw a stick and then answer the question that matches the color of their stick.

You may also choose to use any other modification of this activity in which participants are randomly assigned a question to answer.

30 minutes

# Extend

**Facilitator's Note: Categorical Highlighting Colors**

On **slide 18**, highlight the bold words in the colors that you would like participants to use when highlighting those sections.

Transition to **slide 18**. Organize participants into groups of four. Depending on the size of your previous Beach Ball Talk and Toss groups, you may choose to have your participants remain in those same clusters.

Pass out one copy of the **Authenticity Theory practitioner's brief** to each participant. Give each person a set of three different colored highlighters. Use the Jigsaw instructional strategy and ask each group to split the article up so that each group member reads a small portion.

Explain that as participants read, they will use the Categorical Highlighting strategy to assign each color of highlighter to one of the following prompts:

- Conceptual Definition—Defines or describes the practice being discussed.
- Application—Describes how the practice is implemented in the classroom.
- HPL Connections—Describes principles of how people learn.

Allow participants time to read their sections of the article. Once all participants have read their sections, invite them to share out in their groups what they highlighted. Ask participants to discuss how the Authentic Learning Framework aligns with the principles of how people learn.

20 minutes

# Evaluate

Display **slide 19** and watch Forney ISD's *How We Learn* video that summarizes how people process information.

**Embedded video**
https://youtube.com/watch?v=wlaG99awCD8

Pass out one copy of the **Triangle-Square-Circle** handout to each person. Display **slide 20** and introduce the Triangle-Square-Circle activity. Ask participants to reflect on the knowledge gained from the session and answer the following prompts on their handout:

- What are three important points from today's session?
- What "squares" with your thinking? What ideas align with your own understanding and viewpoints?
- What questions or ideas are still "circling" your mind?

Once participants have completed all three prompts, invite them to share out some of their responses.

Transition to **slide 21** and invite participants to reflect on the different instructional strategies they saw used throughout the session and consider the impact these strategies had on their understanding or approach.

As they reflect, pass out one copy of the **Instructional Strategy Note Catcher** handout to each participant. Invite participants to fill in the first column with their thoughts on the impact each strategy had on their understanding. Ask participants to fill in the second column with their ideas about how to integrate each strategy into their teaching practices.

If time permits, invite participants to share out their ideas about how they could use the instructional strategies in their classrooms.

# Research Rationale

Learning occurs when people connect new information gained from experience with concepts previously stored in long-term memory. According to Bransford, Brown, and Cocking (2005), students learn new ideas by relating them to what they already know from previous experiences, and metacognitive approaches help students take control of their own learning. Authentic practices can be used as tools to help accomplish the principles of how people learn. Authentic learning experiences increase positive emotions around learning, garner higher perceptions of relevance and long-term understanding, and activate student engagement in learning and intrinsic motivation to learn (Nachtigall et al., 2022; Parsons et al., 2021; Jeter et al., 2019; Kuhlthau et al., 2015). When students have a positive attitude toward the school, they often have positive reactions toward classroom activities and learning in general (Birch & Ladd, 1997), and when students put more effort into their learning, it improves their long-term retention of the content (Schmid & Bogner, 2015).

## Resources


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