



PERSPECTIVES

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AUGUST 2026



Shape & Pattern- Perspective 4

White Paper /
"Caves": The Connection to Learning

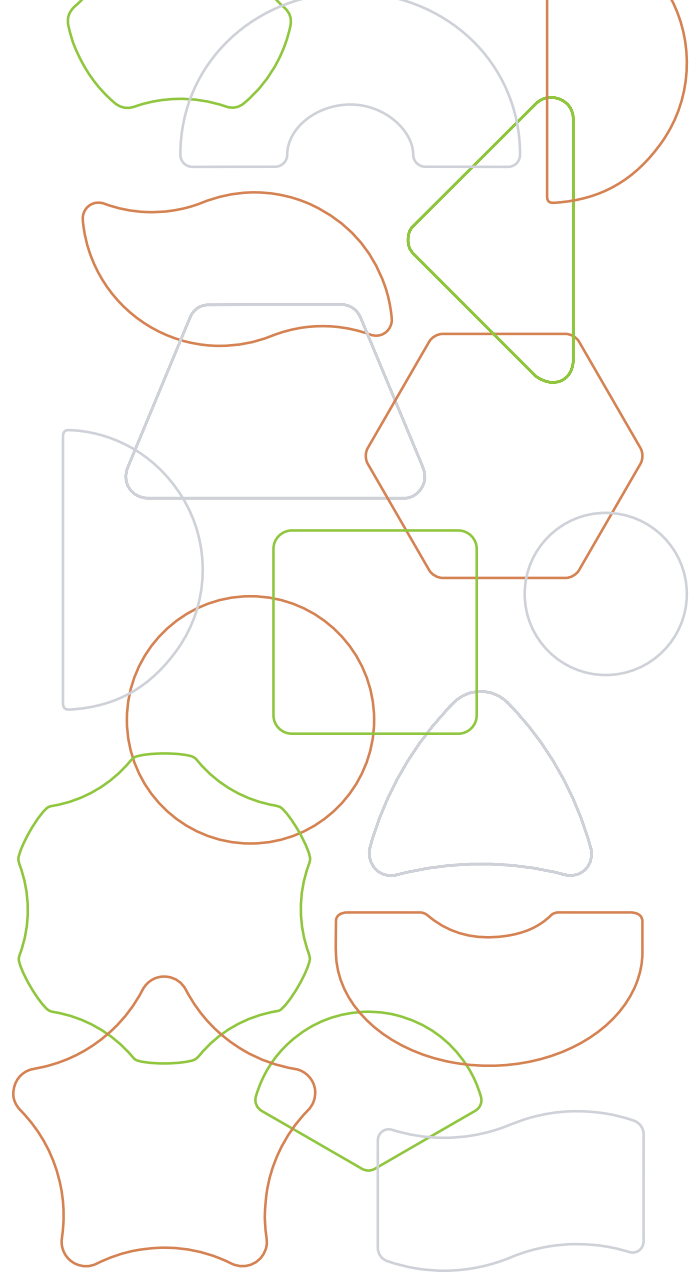
1. INTRODUCTION

Our last 'conversation' was about Thornburg's¹ Watering Hole as the space for social learning supports that true connection and interaction with one's peers. For this series on 'Caves,' we will look at the metaphor as he unpacks its relevance to the learning place."

In the section of "'Learning Places Application by Design,' I shared the following: Patterns 'cue' behaviors. A listing of shapes and each's psychological connection with the potential applications for learning places was shared. Remember? That's our 'pareidolia'"³ in action.

2. CAVE

"The next learning space on our list is the Cave – the home to reflective learning. This process is solitary and involves self-directed meaning making that can be facilitated with outside resources [e.g., books, online information, etc.]. If the Campfire is home to the lecture, and the Watering Hole is home to the dialogue, the Cave is home to the cognitive construction of understanding of the sort described by Jean Piaget². Unlike the social constructivism of Vygotsky³, the cognitive constructivism of Piaget is largely a personal act, although it is informed by presentations and conversations. The point here is for the learner to internalize what he or she knows through experimenting and reflecting on observations."^{p.23}



Thornburg goes on to share two important insights from Piaget's work:

"Learning is an active process: Direct experience, making errors, and looking for solutions are vital for the assimilation and accommodation of information." ^{p.23}

"Learning should be whole, authentic, and 'real': Meaning is constructed as children interact in powerful ways with the world around them. The focus needs to be on whole activities as opposed to isolated skill exercises." ^{p.23}

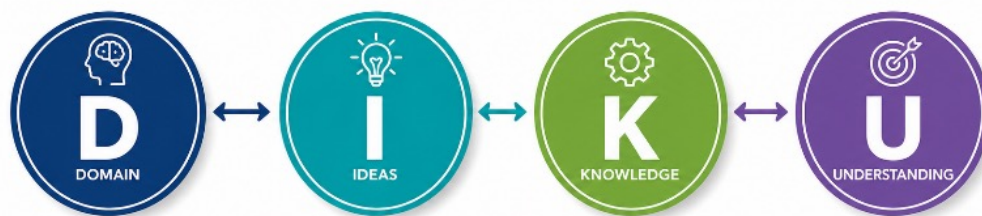
Several types of learning practices support this type of digging into one's learning process. These may include problem-base, project-base, and inquiry-based as examples. Each of these practice types allows for the learner to problem solve. The answers are not given. Nothing is rote learning. Why is this approach important? What we know is we have to 'own our own knowledge,' or it simply does not stick. Retrieval then, if at all, is short term at best when rote learning practices are used. Digging in means we are employing multi-sensory cognition and these provide direct links to our working memory apparatus, our brain's file cabinet, for storage and later retrieval.

It's fair to say then, that when learning is related to context, vs content, it sticks. Why? Again, we as humans take in information from our senses, not just the five talked about most often - hear, see, taste, touch, smell. But also, from our 600+ muscles through movement, and our inner-ear through balance.⁴ Thornburg goes on to recognize the explosion of information everyone is dealing with every day, and argues that "...the last thing we need is to pump even more of it into the heads of learners. Making meaning from this information – the development of understanding – is what we really should be teaching. In the Piagetian model, learning is contextual." ^{p.24}

2. IT'S NON-LINEAR

I wish I'd known this fact before I went back to graduate school! Everything was always about generating an outline, thinking through items step-by-step. Thornburg shares a model he calls the Domains of Understanding. Here he is explicit. Garnering an understanding is a non-linear path!! Thank goodness! Those of us who think differently are validated. But what is that path? Thornburg calls

it his Domains of Importance⁵ (see diagram). "The four domains of importance include: Data, Information, Knowledge, and Understanding." ^{p.24} A key goal then of education should be to help the learners move from D to U, or Data to Understanding. Again, he reiterates, the process is non-linear [secret yeah!].



Domains of Importance

(Thornburg, 2014)

Moving to Understanding is alone work. It involves deep processing, making meaning, putting data and information into a context where knowledge starts to form and the ha aha moment occurs = understanding; often referred to as 'the light bulb went on!' Cave spaces are those where reflection takes place, and for some that means complete quiet. Yet, for others, and as mentioned in our last series the Watering Hole, an alone/together situation is desired with lots of noise; noise actually becomes the sensory condition for tuning out, but staying focused. The Cave means a need for contemplation. It's important to recognize, deep thinking is contemplative and a much-needed value.

How might this behavior find its own place? When seeing a person in a contemplative state, one can easily judge the individual is in a state of day dreaming. "The apparent belief is that a student is sleeping or is doing something not related to learning if he is too quiet,"^{p.26} is often the normative thought. How then, if this type of behavior is a recognized need, do we provide for this important learning activity to take place? Learners need a physical place to go that gives 'permission' to engage in this type of learning activity. Once again, shapes come to the rescue, but also the psychological need for safety to pursue this important activity.

4. CONNECTING TO PSYCHOLOGICAL SAFETY

"The everyday language 'sense of safety' was found to describe a whole person experience that integrates awareness of self, others, and context. The scope of human experience that impacts sensed safety was found to include seven domains: Environment, Social Climate, Relationships, Body, Inner Experience, Sense of Self and Spirit/Meaning (Whole Person Domains)." ^{6, p.1} The sense of the need to be safe is a fundamental human need. Apparently, we don't distinguish from a physical or psychological threat. Neuro-design solutions help mitigate this basic human need.

These images are indicative of types of spaces that can have dual purposes but are made known to the learners that they may also be used for reflective needs. A circle in a square or rectangle. Remember? Squares = "stability, framing, and importance. Rectangles = calm, security, and order. Circles = gentleness, unity, and balance. Geometric lines = structure, order, and visual hierarchy."



Niches within the classroom, or in corridors, or other 'found' places can cue learners to seek the refuge needed to pursue the head's down work of reflection. Cave design may take on many design attributes. However, if we remember that shapes and patterns are of the natural world, we automatically link these

back to the biophilic tenants so critical to keep us as humans connected to nature in some way.⁸

Some biophilic tenants include shape and pattern, but also color, texture, and when we connect these to natural forms, we add that nature/nurture value.



Take a look at this image by MARCO for example. Wood grains are predominant in the bookcase and niche area on the far wall, as well as on the floor. Direct access to nature is supported by having a window wall. Multiple types of lighting offer variance and control. The brighter colors of the reds and oranges remind us of spring flowers. Nature rarely has a dominant hue of bright colors. The most

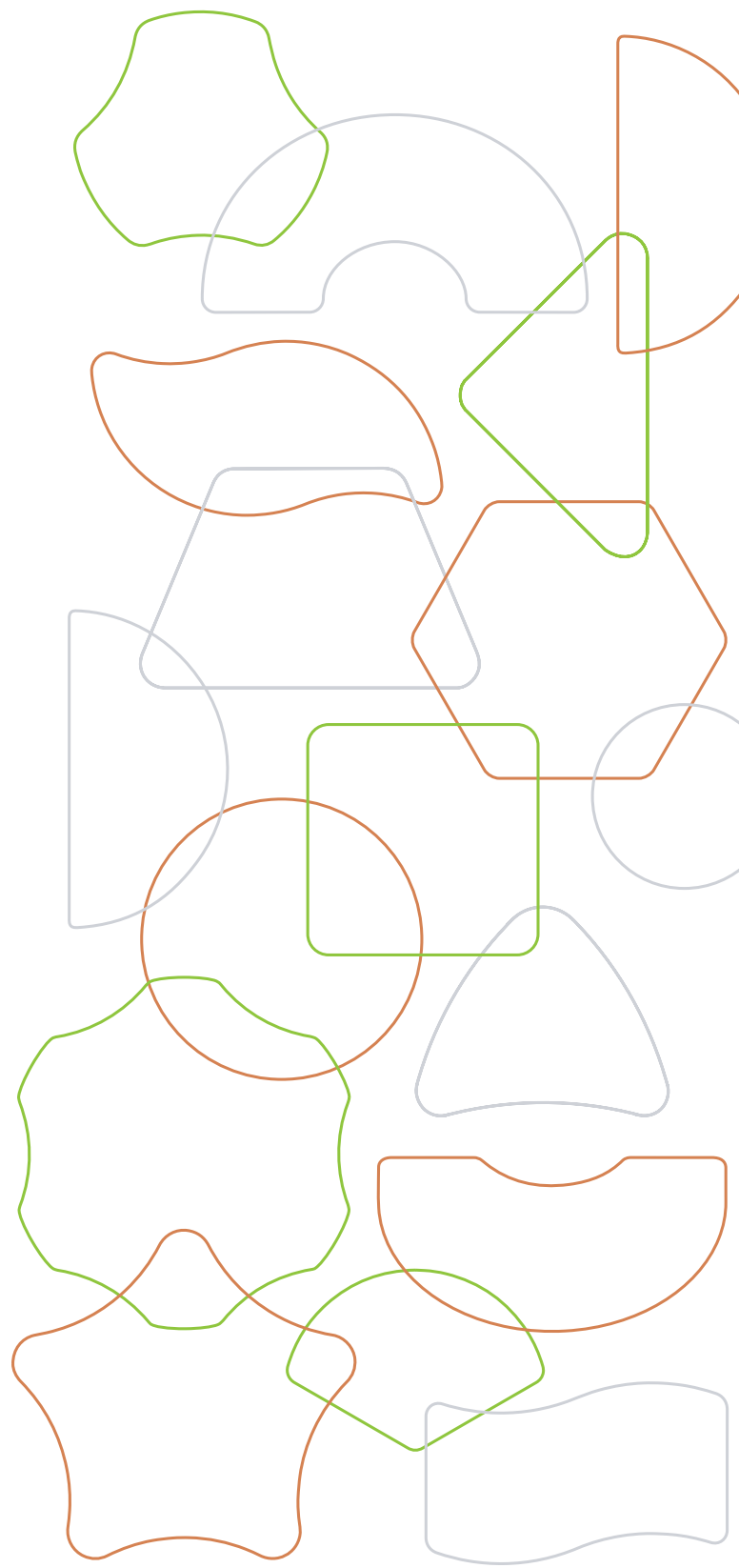
dominant is when we are in a forest of multiple shades of green, the prairies with that multitude of tans to cream, and of course our biggest area of the oceans of blue and the frozen components of white and gray. So, pops of color are ok, but not as a dominant or all-encompassing one.

To summarize Thornburg's Cave experience, is to recognize, according to him, some of the learning entities' greatest challenges. The challenges are to the curricula and to the practices. A Cave experience however is critical to the processing of D to I to K to U! Make the design of the learning place reflect the need. Create a Cave!!! It will automatically give permission for both the educator and the learner and it becomes built into the rhythm of learning every day. It is essential to support this process.

5. TO 'LIFE'!

That's next on the series' agenda. "In the context of our four learning spaces, Life is the one devoted to the meaningful application of the things learned."⁹

Should be interesting to dig deeper here!
Until next time.



4. ENDNOTES

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