A Podcast and Website for Informal Educators and How It Can Disseminate Best Teaching Practices: Project Summary and Artifacts

by

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Project summary and artifacts relating to the capstone submitted in partial fulfillment of the requirements for the degree of Master of Arts in Education: Natural Science and Environmental Education

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Project Summary

This packet contains printed versions of the dissemination tools I created for my project to address the question *How can online tools be used to disseminate best teaching practices among informal educators?*

My project consists of a podcast, website, and electronic newsletter. In the podcast, I carry out conversations with informal educators about their unique environments and challenges. The website and electronic newsletter expand on those conversations with connections to pedagogical theory. The project's goal is for these electronic tools to provide information and communications channels for informal educators, thus facilitating a virtual conversation that will eventually support a community of practice.

These instruments are episodic in nature; that is, they are released to the public one week at a time. I have included four weeks' worth of material in this packet, or the first month of the project's ongoing content. I have also included some screen captures of the website itself. However, these reproductions are by necessity representative; in some cases, formatting and illustrations cannot be reproduced in this format. The podcasts, naturally, require a listener. Reviewers are encouraged to visit the original media at the links provided.

Many of the artifacts listed herein have not been published publicly at the time of this packet's printing. In those cases, the content can be found on the pre-publication links, which have also been provided.

These global links are also available:

- https://www.theclassroombeyond.com: This live web site contains all blog posts and podcasts that have been published but omits future posts.
- https://dev.theclassroombeyond.com: This review web site contains prepublication blog posts and podcasts, as well as the live posts.

Website Screen Images

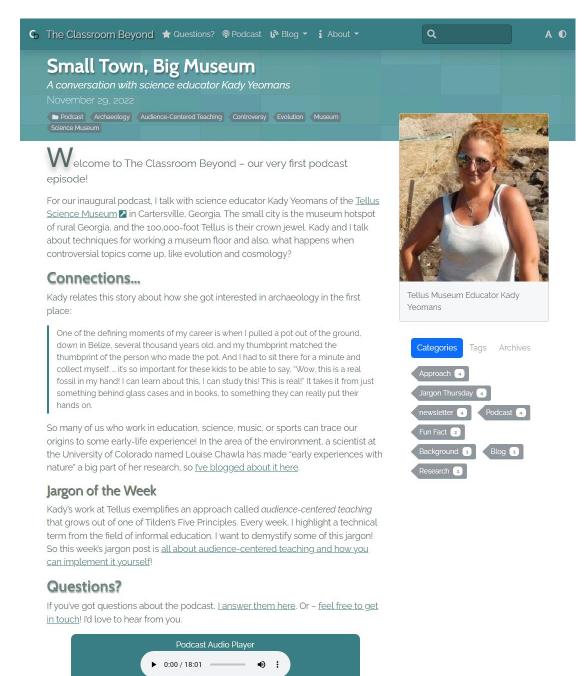
Figure 1
Website home page



Figure 2

One podcast episode's web page

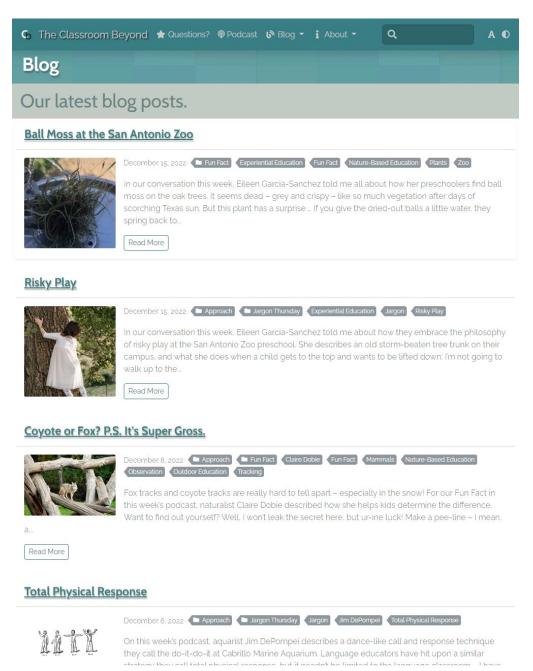
Facebook Twitter Print



Note: https://www.theclassroombeyond.com/podcasts/s01/e01-small-town-big-museum/

Figure 3

Blog page, top section



Note: Remaining content has been cropped. Original page:

https://www.theclassroombeyond.com/blog/

Project Artifacts

November 22, 2022: Pre-Release Week

Electronic Newsletter: Our very first episode drops next week!

Web link:	https://www.theclassroombeyond.com/newsletters/2022-11-22
Notes:	Since the podcast has not yet been released, there are no subscribers yet. Therefore, this week's newsletter was sent via regular e-mail to all the podcast guests as well as to Hamline faculty and colleagues.
Content:	Dear friend of The Classroom Beyond,
	We're just one week away from the first episode of my podcast for informal educators! Starting on the 29th of November, I'll be dropping a new conversation every Tuesday. Here's what the first three episodes have in store:
	Nov. 29: Tellus Science Museum (Georgia) educator Kady Yeomans; we talk about museum floor technique and handling controversial topics. Blog posts on <i>audience-centered teaching</i> and the research of Louise Chawla on early-life experiences in nature.
	Dec. 6: Cabrillo Marine Aquarium (California) educator Jim DePompei on their storied history of teaching through movement and activity. I blog about the teaching technique <i>total physical response</i> and one of the world's more bizarre silversides: <i>grunion</i> .
	Dec. 13: San Antonio Zoo (Texas) educator Eileen Garcia-Sanchez on the benefits of <i>risky play</i> and experiential education for pre-school aged learners. The blog describes the link between risky play and children's health – research seems to indicate that promoting some risk-taking leads to <i>more</i> safety and wellbeing.
	Each podcast also includes a "fun fact" of the week – from the smell of coyote urine to a peripheral vision experiment – so make sure to listen until the end!
	Oh, by the way – I don't believe in involuntary e-mail newsletters . If you <i>want</i> me to keep you up to date on the project, just respond to this message with a "count me in" or something and I'll add you to my list. (Or <u>visit the newsletter page</u> to subscribe.) Otherwise, you can expect no more bulk e-mail from me, I promise.
	To those of you from the U.S., Happy Thanksgiving! To all of you, many thanks again for your interest and support of the project. Feel free to get in touch – I'd love to hear what you think.

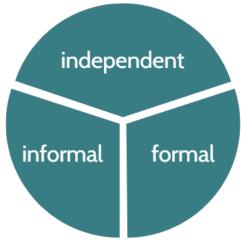
Blog Post: What's an Informal Educator?

Web link:	https://www.theclassroombeyond.com/blog/2022/11/informal-
	educator/
Taxonomies:	Category: background, Jargon Thursday
	Tags: informal education, jargon
Content:	Since we're aiming to create community among informal educators here, it seems only natural that we should start by defining our terms: What is an informal educator, exactly?
	To start with some eliminations, we all intuitively know that a formal educator is the one in the classroom: your Grade 3 lead teacher, high school chemistry teacher, or college professor. Learners are enrolled at an institution; teachers are the employees of that institution.
	So informal educators are the art museum tour guide and the naturalist who leads children on their first wilderness walk. But if you think for a minute, you'll come up with lots more examples of people who aren't classroom teachers, but do teach children and adults1:
	 basketball coach
	• cultural interpreter
	• piano teacher
	afterschool supervisor
	• camp counselor
	museum guide
	• aquarist
	scout master
	• naturalist
	guitar teacher
	• docent
	• storyteller
	• babysitter
	• zoo guide
	wilderness leader
	I could go on and on
	But what about grandma? Right. There are a whole lot of situations where we learn outside of the classroom but in unstructured ways. Our grandma teaches us to make dumplings, we watch YouTube videos about how to make podcasts, we read a book. Humans learn from each other but also by ourselves.

UNICEF came along in the 1970s and decided that education had three components: formal, informal, and non-formal. Here's how they divvied it up:

UNICEF's name	What it meant
formal education	structured and graded; primary, secondary, and technical school
informal education	lifelong learning; mediated by our friends, communities, the marketplace, and mass media
non-formal education	organized but outside of the formal education system

To them, all of us naturalists and coaches in the word cloud above are engaged in non-formal education – but in the time since, almost everyone started using informal to refer to folk like us. Personally, I think non- and in- are just too similar to be intuitively useful, so I use this paradigm:



independent, informal, formal

So...

To me, we're informal educators who teach in a structured way, often within a non-school institution like a park or a dance school. We usually see our students for short times, and sometimes just once.

Formal educators, of course, are the ones in schools and universities. They see their students regularly and for weeks or months at a time.

People all learn independently, too – through media, conversations with friends, and having experiences.

Clear as mud?

What do you think?

I'd love to hear your thoughts! Comment below or get in touch!

Read more

- Coombs, P.H.; Prosser, R.; Ahmed, M. *New Paths to Learning*. International Council for Educational Development/UNICEF: New York, NY, USA, 1973.
- Eshach, H. (2007). Bridging in-school and out-of-school learning: Formal, non-formal, and informal education. *Journal of Science Education and Technology*, *16*(2), 171–190. https://doi.org/10.1007/s10956-006-9027-1

Podcast: The Classroom Beyond is Coming Soon!

Web link:	https://www.theclassroombeyond.com/podcasts/s01/episode-00-teaser/
Audio file:	https://traffic.libsyn.com/6c58e7a5-3e64-4008-bc94- 1f6ed52825d3/20221101 Promo 2.mp3
	110cd52625d5/26221101_110fff6_2.fffp5

November 29, 2022: Launch Week

Electronic Newsletter: It's the first episode ever!

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https://www.theclassroombeyond/newsletters/2022-11-29/
The premiere has arrived! This week we air the first episode of The Classroom Beyond Informal Education Podcast. Here's what's in store:
The Podcast
I talk with Tellus Science Museum (Georgia) educator Kady Yeomans about museum floor techniques. Tellus is a world-class museum in a small town, Cartersville, Georgia, a city of about 25,000 in rural northern Georgia. The town's dream was to become a regional museum hotspot. The Tellus is its crown jewel, and Kady and I talk about museum floor techniques and how to teach content like evolution that may be at odds with your audience's values. Here's a link to the <u>podcast episode</u> .
New to Podcasts?
Not an active podcast listener? Here are some hints.
There are a lot of ways to hear podcasts. First, you can <u>listen right</u> <u>from the Web site</u> .
 Most folks, though, like to use a smartphone app like Apple Podcasts, Google Podcasts, or Spotify. I've got <u>direct links for all</u> <u>those apps</u> on the Web site.
 You can also search for the podcast from whatever app you use. The best search phrase is "The Classroom Beyond Informal Education Podcast."
The Blog
Along with the podcast, each week I post to the Web site. First, I write a lot about education jargon – like the post on <u>audience-centered</u> <u>teaching</u> that accompanies this week's podcast. When I entered the career as an outdoor educator, I never got briefed on all the educator-speak I needed to know! So I'm trying to make up for the gap.
Sometimes I will also focus on a topic from the conversation, like this week's post about <u>research into early-life nature experiences</u> .
Fun Facts!
Finally, at the end of each podcast conversation, I feature a <i>fun fact</i> from one of the educators. We teachers are, after all, learners, too! This week, for example, there's a peripheral vision demo from naturalist Claire Dobie. So make sure you listen until the end!
Coming Soon:
Dec. 6: Cabrillo Marine Aquarium (California) educator Jim DePompei

 Dec. 13: San Antonio Zoo (Texas) preschool educator Eileen Garcia-Sanchez

As always, please feel free to get in touch with feedback or ideas. It's a brand new project and I'd love to know which parts are working for you.

Blog Post: Audience-Centered Teaching

	T
Web link:	https://www.theclassroombeyond.com/blog/2022/12/audience-
	centered-teaching/
Taxonomies:	Category: Approach
	Tags: audience-centered teaching; Freeman Tilden; jargon; Kady
	Yeomans; museum; The Six Principles
Content:	In this week's podcast, educator Kady Yeomans describes her work leading groups of kids on the floor of a large science museum. And the main sense I got from Kady was that she is <i>always</i> thinking about her audience – there are facts to deliver, sure, but there's no <i>lecture</i> .
	Here's how she put it, speaking from her learners' point of view:
	This is a new place! And an exciting person who has this new perspective about things! I think when the can access the information through a different source, it definitely gives them a, "Whoa, this person in a professional setting also thinks this maybe I should listen!" So I think it gives the kids another way to interact with the information.
	Her words recalled to me good ol' Freeman Tilden, a forerunner of today's non-classroom educators – what we sometimes call interpreters. Tilden attempted to classify the work of the cultural naturalist and established six principles of our work. I'll post about all six someday, but the very first of them is what Kady and I would call <i>audience-centered teaching</i> .
	Here's how Tilden worded it:
	Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile. (p. 9)
	Relate what you are saying to your audience that's the key to audience-centered teaching. Here's the new-teacher trap: giving lots of facts. Their lessons are planned and their research is complete, so they deliver everything they know as efficiently as possible. We informal educators often learn "a program" – an hour-long tour through the museum, say. Early on, we stick to that program even faced with the yawning evidence that our facts are not landing on our audience.

How can I connect with my learners? Audience-centrism is the cure. We start, of course, by getting to know our learners, by asking them as much as we're telling them. At their best, our lessons will feel more like conversations than lectures. However, every informal educator knows that two-way discourse, especially with very young students, can turn into a cacophony of "I saw a fish once, too!" and other assorted whatnot. No one learns from a chaotic free-for-all! So the educator has to guide the group down a middle pathway of interaction, mixing dialogue and facts, conversations and authentic experiences. Let's review... Recall Tilden's words from the first principle: relate to "something" within the personality or experience of the visitor". Whatever and wherever we are teaching, we must forge a link to the learner's past knowledge and experience – the learner's *personal context* – in order to deliver our programs effectively. Tilden's words are over 60 years old, of course, but we still draw inspiration from them. In future posts, I am going to revisit the remaining five principles to see what new learnings we can glean! Read more Tilden, F. (2007). *Interpreting our heritage* (4th ed., expanded and updated). University of North Carolina Press. 1. As a podcaster, I have to admire that a writer from the 1950s managed such a search-engine-friendly concept: "Six Principles of Interpretation that will BLOW YOUR MIND!" I might use that title for a blog post some day...

Blog Post: Get 'em While They're Young: The Work of Louise Chawla

Web link:	https://www.theclassroombeyond.com/blog/2022/11/get-em-while-	
	they-re-young/	
Taxonomies	Category: Research	
:	Tags: biography, E.O. Wilson, experiential education, Louise Chawla, Kady Yeomans, outdoor education	
Content:	In his memoir, E.O. Wilson writes of trying to lure a giant ray to the Florida seashore as a seven-year old boy. His parents were divorcing, so he had been sent to stay at a coastside boarding house. There, he spent long days alone, exploring the beaches and bays near Pensacola. After a brief glimpse of a huge ray off a dock, Wilson became fascinated with	

the idea of seeing larger and larger fish, and even, he hoped, enticing that ray back for another look.

So he baited lines, caught small fish, used the small fish to lure larger fish, and, mostly, waited, immersed in the nature of the Florida coastline. Though he never attracted the ray back, he did fall in love with a Gulf toadfish he described as "one of the ugliest of all sea creatures." At age seven, Wilson writes, he experienced the joy of wildness that eventually led to a distinguished career as a scientist and nature lover.

And that – that early experience with the outdoors – is how environmentalists are made. He writes:

Hands-on experience at the critical time, not systematic knowledge, is what counts in the making of a naturalist. Better to be an untutored savage for a while, not to know the names or anatomical detail. Better to spend long stretches of time just searching and dreaming. (p. 12)

"Just searching and dreaming..." is there a better way to learn? Organically, by following one's own natural curiosity and amazement? The names and facts come later – the fascination comes first.



Louise Chawla

Photo courtesy University of Colorado.

Starting about 30 years ago, University of Colorado professor Louise Chawla started systematically interviewing environmentalists around the world to unpack that fascination. Her results (building on many others') were overwhelming: three-quarters or more of nature-minded adults had "positive experiences of natural areas in childhood"! Chawla and others, in the end, showed a strong connection between childhood experiences outdoors and environmental sensitivity.

Here's an excerpt from Chawla's literature review:

An interview study of 51 young adults who showed strong interests in natural history and ecology found that they remembered positive experiences of exploratory play in nature, while in contrast, ten young adults who lacked these interests either did not recall free play in nature or described having uncomfortable outdoor experiences forced upon them. (p. 147)

Chawla is careful to note that these connections are correlations and not necessarily causal. That is, people who camp a lot as kids might also be raised in homes with pro-environmental values, which they then later soak up and reproduce.

But think back to E.O. Wilson. His family was not especially present; his parents were divorcing and sent him off to the shore for the summer while they settled their personal affairs. (As an aside, let us all marvel that less than a century ago, it seemed acceptable to install your 7-year old son, on his own, at a boarding house for the summer.)

And yet, despite little influence from his family, Wilson's first outdoors, that brief glimpse at a giant ray off the Florida panhandle set him on his path. A minute or two of wonder and awe in his youth led him to a life spent learning and teaching about the natural world.

So What?

It's so important for these kids to be able to say, "Wow, this is a real fossil in my hand! ... This is real!"

Kady Yeomans

So... that's what we do! We, as informal educators, expose learners to the real world in a way unparalleled by their classroom experiences. On this week's <u>podcast episode</u>, science educator Kady Yeomans describes the formative experience of her youth that led her into a career of archaeology and museum education:

I pulled a pot out of the ground ... several thousand years old, and my thumbprint matched the thumbprint of the person who made the pot. And I had to sit there for a minute and collect myself. ... it's so important for these kids to be able to say, "Wow, this is a real fossil in my hand! ... This is real!"

Sometimes, informal education complements classroom education. But other times – by mediating authentic, awe-inspiring connections with the worlds of nature, music, sports, culture, and art – we non-classroom educators have the potential to change the direction of children's lives.

- Chawla, L. (2007). Childhood experiences associated with care for the natural world: A theoretical framework for empirical results. *Children, Youth and Environments*, 17(4), 144–170. JSTOR. http://www.jstor.org/stable/10.7721/chilyoutenvi.17.4.0
 144
- Wilson, E. O. (1995). *Naturalist*. Warner Books.

Podcast: Small Town, Big Museum

Guest:	Kady Yeomans, Tellus Science Museum
Web link:	https://www.theclassroombeyond.com/podcasts/s01/e01-small-town-big-museum/
Audio file:	https://traffic.libsyn.com/6c58e7a5-3e64-4008-bc94- 1f6ed52825d3/20221129_Kady_Yeomans_final.mp3
Description:	Welcome to The Classroom Beyond – our very first podcast episode!
	For our inaugural podcast, I talk with science educator Kady Yeomans of the <u>Tellus Science Museum</u> in Cartersville, Georgia. The small city is the museum hotspot of rural Georgia, and the 100,000-foot Tellus is their crown jewel. Kady and I talk about techniques for working a museum floor and also, what happens when controversial topics come up, like evolution and cosmology?
	Connections
	Kady relates this story about how she got interested in archaeology in the first place:
	One of the defining moments of my career is when I pulled a pot out of the ground, down in Belize, several thousand years old, and my thumbprint matched the thumbprint of the person who made the pot. And I had to sit there for a minute and collect myself it's so important for these kids to be able to say, "Wow, this is a real fossil in my hand! I can learn about this, I can study this! This is real!" It takes it from just something behind glass cases and in books, to something they can really put their hands on.
	So many of us who work in education, science, music, or sports can trace our origins to some early-life experience! In the area of the environment, a scientist at the University of Colorado named Louise Chawla has made "early experiences with nature" a big part of her research, so <u>I've blogged about it here</u> .
	Jargon of the Week
	Kady's work at Tellus exemplifies an approach called <i>audience-centered teaching</i> that grows out of one of Tilden's Five Principles. Every week, I highlight a technical term from the field of informal education. I want to demystify some of this jargon! So this week's jargon post is all about audience-centered teaching and how you can implement it yourself! Questions?
	Questions:

If you've got questions about the podcast, <u>I answer them here</u>. Or – <u>feel</u> <u>free to get in touch!</u> I'd love to hear from you.

December 6, 2022

Electronic Newsletter: Time to Do-It-Do-It

Web link:	https://www.theclassroombeyond.com/newsletters/2022-12-06/
Pre- publication review link:	https://dev.theclassroombeyond.com/newsletters/2022-12-06/
Content:	Thanks for all of the positive feedback about last week's <u>premiere</u> <u>podcast episode</u> ! I can't tell you all how much I appreciate your support. The Podcast
	This week, I'm talking with Jim DePompei of the Cabrillo Marine Aquarium in Los Angeles. It's a legendary facility for Angelenos like myself, and one part everyone remembers is a full-body-teaching technique they call a "do-it-do-it." Jim and I talk about training instructors to incorporate these physical call-and-response structures (even if we sometimes feel a little silly). Here's a link to the podcast episode.
	New to Podcasts?
	Not an active podcast listener? <u>Here are some instructions for how to get</u> started.
	The Blog
	This week, I blog about <u>total physical response</u> . TPR started as a language instruction technique, but it doesn't need to be limited to that – the do-it-do-it is a great illustration of how learners using their bodies can promote knowledge retention.
	Also, since this week's fun fact is all about smelling coyote and bobcat pee (seriously , listen 'til the end!), I have a post about that strange pastime, but also about tracking – as a skill and a teaching metaphor. Check it out on the blog here!
	Coming Soon!
	Next week, I'll talk with San Antonio Zoo (Texas) preschool educator Eileen Garcia-Sanchez.
	As always, please feel free to get in touch with feedback or ideas. It's a brand new project and I'd love to know which parts are working for you.

Podcast: From Physical Response to Visitor Engagement

Guest:	Jim DePompei, Program Director, Cabrillo Marine Aquarium
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Web link:	https://www.theclassroombeyond.com/podcasts/s01/e02-physical-response-visitor-engagement/
n	
Pre-	https://dev.theclassroombeyond.com/podcasts/s01/e02-physical-
publication review link:	response-visitor-engagement/
Audio file:	https://traffic.libsyn.com/6c58e7a5-3e64-4008-bc94- 1f6ed52825d3/20221206_Jim_DePompei.mp3
Description:	This week, I talk with Jim DePompei of the <u>Cabrillo Marine</u> <u>Aquarium</u> in Los Angeles. This storied facility was founded over 75 years ago, so generations of locals have experienced its tanks and displays. What most (including me) remember, though, is the grunion dance.
	Grunion in the sand
	Grunion!
	Pook in the 1050s, one of the early equation directors named John

Back in the 1950s, one of the early aquarium directors named John Olguin started a program of teaching about *grunion*. Grunion are silversides – small fish in the smelt family – and pretty unremarkable except for this one thing: they dance.

For a few months every year, grunion visit wide, sandy beaches in Southern California around full and new moons – the highest tides. They use wavelets to coast as high up the beach as possible, and then they make burrows. Females wriggle backwards into the sand, making temporary holes in which they nestle – *vertically*, mind you – with their heads sticking up. Several males then come along and twist themselves around the females, fertilizing the eggs that she has deposited into the burrow.

The Grunion Dance!

The whole thing is quick but mesmerizing. And Cabrillo Marine Aquarium naturalists teach about these quirky fish, among other natural wonders, using a dance. Students wriggle and twist just like the grunion, learning about fish biology without realizing that they're learning anything at all. And Cabrillo teachers don't stop there – they

use broad, dance-like sequences in a call-and-response pattern that they call *do-it-do-it*.

The grunion dance and the other *do-it-do-its* at Cabrillo Marine Aquarium are examples of what language educators call **total physical response**. TPR is a great strategy for informal educators to incorporate into their lessons – so I've put up a blog post <u>here</u>.



Not a grunion; also not a bobcat.

Photo by Patrice Schoefolt via Pexels

This Week's Fun Fact!

The fun fact that follows this week's podcast comes to us from naturalist Claire Dobie – and it's all about how to tell bobcat and coyote tracks apart. <u>I've blogged this week</u> about how important the arts of observation and tracking are for learners – and how they sometimes work best in informal environments!

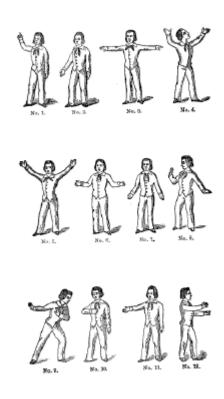
The Podcast

Enjoy this week's conversation with Jim DePompei. As always, I would love to hear back from you about what you thought!

Blog Post: Total Physical Response

Web link:	https://www.theclassroombeyond.com/blog/2022/12/total-physical-
	<u>response/</u>
Pre-	https://dev.theclassroombeyond.com/blog/2022/12/total-physical-
publication	response/
review link:	
Taxonomies:	Category: Approach, Jargon Thursday
	Tags: jargon, Jim DePompei, total physical response
Content:	On this week's podcast, aquarist Jim DePompei describes a dance-like
	call and response technique they call the <i>do-it-do-it</i> at Cabrillo Marine

Aquarium. Language educators have hit upon a similar strategy they call *total physical response*, but it needn't be limited to the language classroom – I have used it teaching science as a way to bridge the gap between boring vocabulary and pretty interesting natural processes!



Gestures Teach!

How To Do TPR

Here's how it works: First, collect a set of vocabulary around a particular topic. In my case, I was teaching fifth grade earth science and wanted to introduce water cycle words – precipitation, groundwater, and so on.

Then, invent a gesture for each of the vocabulary words. The more fitting your getsure, the better. For example, I used wiggling fingers for *precipitation* and two hands, palm-up, face-out for *dam*.

Next, you'll want to model your gestures, asking students to repeat after you. As Jim DePompei noted, it's not important if all your learners are following along – sometimes, they don't at first but they are still getting the benefit of the gesture.

At some point, try to bring out a printed or written version of the world. In a classroom, you might have the advantage of a word wall or

bulletin board. Mobile educators might use a magnet board or portable whiteboard. Now, you can adapt the repetition phase as you like – maybe pairs or small groups practice the gestures; maybe you do a silent mastery check by pointing at words and seeing how they do. This part can be really fun, like at the Cabrillo Marine Aquarium – it's an entire dance! And that's the key – the more fun, the more will be remembered. **How Does it Work?** Back in the 1960s, a researcher named James Asher noted that children learning Japanese improved when they paired vocabulary with movement. Students would be asked to sit down, they would reeat the Japanese word for "sit down," and they they would physically sit down. Those students learned the words better than students in traditional language classes. Asher's conclusion (building on and enlarged by many other researchers) was that motor skills are extremely durable – they have "enormous resistance to extinction," in his words. Since then, TPR has been used extensively in language instruction and with great success – moving leads to durable memories. For informal educators, TPR is an incredible tool – not only because movement is engaging and fun, but because the facts we learn while moving stay with us longer than the ones we merely hear. Read more Asher, J. J. (1969). The total physical response technique of learning. The Journal of Special Education, 3(3), 253– 262. https://doi.org/10.1177/002246696900300304

Blog Post: Covote or Bobcat? P.S. It's super gross.

Web link:	https://www.theclassroombeyond.com/blog/2022/12/coyote-bobcat-
	super-gross/
Pre-	https://dev.theclassroombeyond.com/blog/2022/12/coyote-bobcat-
publication	super-gross/
review link:	
Taxonomies:	Category: Approach, Fun Fact
	Tags: Claire Dobie, fun fact, mammals, nature-based education, observation, outdoor education, tracking
Content:	Bobcat tracks and coyote tracks are really hard to tell apart – especially
	in the snow! For our Fun Fact in this week's podcast, naturalist <u>Claire</u>
	<u>Dobie</u> described how she helps kids determine the difference. Want to
	find out yourself? Well, I won't <i>leak</i> the secret here, but <i>ur-ine</i> luck!

Make a *pee-line* – I mean, a bee-line – to <u>this week's podcast</u>. After my conversation with Jim DePompei, Claire fills us in. *She's our number one*!

In All Seriousness...

Tracking is a great outdoor skill to teach, but **also a great metaphor**. As an outdoor educator, I loved teaching different track shapes. Scat – feces – can tell you a lot, too, like if it's got fur in, the scat is from something that eats other animals. There's a great Paul Rezendes book all about that art – how to read the natural area around you for its signs.

There's a lot more to tracking, though. When I worked as an outdoor educator, I used a very broad definition of tracks – more than just prints and poop. To me, a *track* is anything that tells you what went before you. I remember one spot where our chaparral trail suddenly went through a cluster of willow trees – the only trees in that area that grew over our heads. Through some dialogue, I led my learners to discover that the willows were a kind of track, too – the water-loving willows were a sign that water ran collected along that part of the trail during the wet season.

Anything out of the ordinary can be a track. Start with learners' everyday lives. A package on your doorstep? That's a UPS driver track. A sour smell in front of the school? The cafeteria delivery truck just left.

Then you can move on to natural tracks. A large scar on a tree trunk? Some large animal put that there – look for signs of deer or vandalizing teenagers nearby. One particular spot where a lot of mushrooms are growing? Maybe something died there!

Another great place to start *tracking* activities are classic **nature scavenger hunts**. If you find a pine or cypress cone, look around – are there any trees nearby it might have come from? If not, then what is that cone – that *track* – telling you? How did that cone get there? You can start these hunts with a specific list ("something with 3 colors," "a seed," "3 feathers"). But your end goal is to get students to look for tracks you didn't suggest – to look for "anything out of the ordinary." That's the lesson of tracking: learning about what's not there anymore

That's the lesson of tracking: learning about what's not there anymore by exploring what was left behind. It's an incredible life skill, and one that demands the kind of novel environments that informal educators employ.

Find out more!

• Rezendes, P. (1999). Tracking and the art of seeing: How to read animal tracks and sign (2nd ed). HarperCollins.

December 13, 2022

Electronic Newsletter: Nature-Based Education at the Zoo

Web link:	https://www.theclassroombeyond.com/newsletters/2022-12-13/
Pre-	https://dev.theclassroombeyond.com/newsletters/2022-12-13/
publication	
review	
link:	
Content:	Hi, friends! I can't tell you how much I appreciate hearing from you through e-mail, the comment form, and even in person about my little informal education project. Clearly there's an audience out there! Thanks again for your interest and don't forget, if you know an informal educator who's got something to say about teaching, ask them to get in touch!
	The Podcast
	This week, I chat with Eileen Garcia-Sanchez of the San Antonio Zoo Preschool. Eileen and I talk about what traditional preschool looks like when blended with the outdoors, not to mention the unique environment of a zoo. Here's a link to the <u>podcast episode</u> .
	The Blog
	I was curious about teaching in the harsh climate of a Texas summer. Eileen assured me that heat can't spoil a child's sense of adventure and discovery. And, of course, there are these <i>moss balls</i> to explore! I didn't know what those were, either – it turns out that there's a bromeliad-relative called ball moss found all over the region. They are fascinating and bizarre, so I blog about them here
	Also, of course, since Eileen had so much to say about risky play I wrote up a <u>quick gloss of that fascinating topic</u> . (The TL;DR is: <i>Smart Risky Play Makes Kids Safer</i> .)
	Coming Soon!
	It's time to expand our definition of informal educator! Next week, I talk with Memphis music teacher Jim Cornfoot, so try to imagine what arts instruction has in common with outdoor education. (Spoiler: it's quite a lot.)
	As always, please feel free to get in touch with feedback or ideas. It's a brand new project and I'd love to know which parts are working for you.

Podcast: Nature-Based Education at a Zoo Preschool

Guest:	Eileen Garcia-Sanchez of the San Antonio Zoo
Web link:	https://www.theclassroombeyond.com/podcasts/s01/episode-03-nature-based-education-zoo-based-preschool/
Pre- publication review link:	https://dev.theclassroombeyond.com/podcasts/s01/episode-03-nature-based-education-zoo-based-preschool/
Audio file:	https://traffic.libsyn.com/6c58e7a5-3e64-4008-bc94- 1f6ed52825d3/20221213_Eileen_Garcia-Sanchez.mp3
Description:	On this week's podcast, I talk with Eileen Garcia-Sanchez of the San Antonio Zoo in Texas. It's a fully-accredited preschool that takes a lot of its inspiration from the world of outdoor education. At the school, children spend a majority of their time outdoors, on both the school's outdoor campus and in the zoo itself. Eileen and I talk about nature-based learning experiences and of all things, moss balls! Ball moss is a fascinating Texas epiphyte – I've put some pictures and info up on the Web site. Risky Play Safety is a big topic for informal educators who take their students into unusual (sometimes outdoor) settings. How can we justify putting our learners into situations they're not equipped for? Climbing on rocky shores, exposed to biting insects, baking in the sun – aren't we just asking for negative health consequences? Well, as I discuss in this week's blog post, the real risk is not exposing students to risk. Here's what one researcher had to say about it: Injury prevention plays a key role in keeping children safe, but emerging research suggests that imposing too many restrictions on children's outdoor risky play hinders their development. (Brussoni et al., 2012) That's right – to keep kids safe, they need to take risks! Listen to the podcast below, and then for some more details and links, check out the blog!

Blog Post: The Benefits of Risky Play

Web link:	https://www.theclassroombeyond.com/blog/2022/12/risky-play/
Pre-	https://dev.theclassroombeyond.com/blog/2022/12/risky-play/
publication review link:	

Taxonomies:	Category: Approach
	Tags: experiential education, jargon, risky play
Content:	In our conversation this week, Eileen Garcia-Sanchez told me about how they embrace the philosophy of risky play at the San Antonio Zoo preschool. She describes an old storm-beaten tree trunk on their campus, and what she does when a child gets to the top and wants to be lifted down:
	I'm not going to walk up to the student and pick them up and put them down. I'm going to walk to that student and I'm going to offer them <i>advice</i> on how they can get down. I'm going to walk through it with them. And I say, "Well, you see how your foot is right here? What if we put our other foot down here?" We like to walk through the risks with the students because when you walk through it with the students, then that helps them build the confidence and being able to conquer it again by themselves. They'll feel confident in approaching that stump again to climb it.
	That can be a hard sell for parents, though. I mean, as teachers, isn't your first job to keep young learners safe?
	Safe
	Of course we want kids to be safe. But it's critical that we take a broad view of what <i>safe</i> really means.
	• Is a child who stays at home every weekend <i>safer</i> than one who climbs trees or explores creeks?
	The sedentary, homebound child is certainly less apt to get a scrape or a bug bite. But they have also lost out on developing awareness about their own body's capabilities.
	Injury prevention plays a key role in keeping children safe, but emerging research suggests that imposing too many restrictions on children's outdoor risky play hinders their development
	A seminal paper came out about ten years summarizing risky play research (Brussoni et al., 2012). It's very dense, but the key finding is this:
	Keeping children safe involves letting them take and manage risks. (p. 3134)
	Got that? Safety requires risks. That's the philosophy behind the <u>adventure playground movement</u> – where junkyards full of tools and scrap materials are opened to children in places like <u>The Anarchy Zone in Ithaca, New York</u> or the many junk playgrounds in Denmark.
	Importantly, these places are not anarchic (despite the name). There are rules – sometimes a couple set by the park like "no flip-flops". One Japanese junk playground asks that you supervise your toddlers while they set fires. But mostly, the rules of conduct are set

by the kids themselves. They decide how to play, and with whom, to keep *themselves* safe.



Free Play
Photo by Charles Parker via Pexels

So, why is risky play so important for kids? The key seems to be not the risks, specifically, but the *freedom*. Autonomy while playing means kids can make mistakes:

- **social mistakes**, like not taking turns
- **physical mistakes**, like tripping or getting stuck in a high place

And, crucially, the child has to then *fix* the mistake – maybe right away, maybe the next time they play the same game. Have you ever noticed how two young children having a hammer-and-tongs screaming argument about something can turn it around quickly? Five minutes after the fight, they'll be getting along fine, as if nothing happened.

That's the learning happening. Here's how Brussoni puts it: Through play, children learn societal roles, norms, and values and develop physical and cognitive competencies, creativity, self-worth and efficacy. (p. 3136) Now imagine that same fight, but an adult steps in to break it up. Maybe the adult even takes sides. What has the child learned? *Not* how to settle disputes, control their body, or come up with creative solutions. Instead, the lesson is "make sure you've got the biggest ally on your side." Or imagine Eileen's preschoolers, stuck up in the tree trunk, and she simply lifts them down each time. The lesson there? "Someone will always rescue you."

Interdependence

I'm not saying that children never need to be lifted down from high places or have their fights stopped. (I've done my share of recess duty!) But if we don't give young people some autonomy to both take risks and solve the problems they cause, we *are not keeping them safe* – we're making them *less* safe by stunting the development of both motor skills and decision-making.

Learn some more

- Brussoni, M., Olsen, L. L., Pike, I., & Sleet, D. A. (2012). Risky play and children's safety: Balancing priorities for optimal child development. *International Journal of Environmental Research and Public Health*, 9(9), 3134– 3148. https://doi.org/10.3390/ijerph9093134
- Schiffman, R. (2019, May 10). Making playgrounds a little more dangerous. *The New York Times*. https://www.nytimes.com/2019/05/10/well/family/adventure-playgrounds-junk-playgrounds.html

Blog Post: Ball Moss at the San Antonio Zoo

Web link:	https://www.theclassroombeyond.com/blog/2022/12/moss-balls/
Pre-	https://dev.theclassroombeyond.com/blog/2022/12/moss-balls/
publication	
review link:	
Taxonomies:	Category: Fun Fact
	Tags: experiential education, fun fact, nature-based education, plants,
	ZOO
Content:	In our conversation this week, <u>Eileen Garcia-Sanchez</u> told me all about how her preschoolers find ball moss on the oak trees. It seems dead – grey and crispy – like so much vegetation after days of scorching Texas sun. But this plant has a surprise
	If you give the dried-out balls a little water, they spring back to life! Their natural green hue returns and they seem completely alive, no longer dormant in the harsh weather.



If you put the ball moss at the San Antonio Zoo School in some water, it seems to spring back to life.

Photo by Eileen Garcia-Sanchez

A little about ball moss

First of all, it's not moss. Just like starfish aren't fish, this plant got named inaccurately. True mosses don't have flowers, but ball moss, or *Tillandsia recurvata*, is in the same family of flowering plants with pineapples and bromeliads.

Bromeliads and ball moss are both *epiphytes*, which means they live on other plants. They aren't parasites – they don't take nutrients or water from their hosts. They just hitch a ride on taller plants like oak trees to get some support.

The balls that give *T. recurvata* are made up of several different individual plants growing together in a tangle. (The individuals are called, no joke, the "pups" of the ball moss.) Native peoples of what is now Mexico and Central America eat the flowers of ball moss, as do wild animals. (As always, though, don't eat any wild plant until you have an expert tell you that it's safe – and legal where the plant happens to be growing.)

Find out more!

- <u>Ball moss good or bad?</u>
- Wikipedia
- Hornung-Leoni, C. T. (2011). Bromeliads: Traditional plant food in Latin America since prehispanic times. *Polibotánica*, *32*, 219–229.

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 A conversation with aquarium educator Jim DePompei (S01E02) [Audio podcast episode]. In *The Classroom Beyond*.

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