charmed inquiry (and pedagogy)

What did I do?

A thought project chases charms as concept and is committed to post qualitative inquiry through a sensibility of creating and becoming, or in other words, by engaging with transcendental empiricism.

How did I do it?

A dozen fictional letters addressed to a Critical Studies scholar grapple with and question charms as concept—oftentimes in connection with other philosophical concepts.

What did I find?

It is in the grappling and questioning, or chasing, that I learn to appreciate how charms might be utilized in post qualitative inquiry.

What are the contributions?

The research contributes to post qualitative inquiry by suggesting that charms *deteriorate, die, incubate, live, energize, affect, create, produce, seduce, learn, write, move, nurture, support, anticipate, surprise, activate, imagine, catalog, connect, reach,* and *give*. [these concepts inform FYAP MS #2]

What did I conclude?

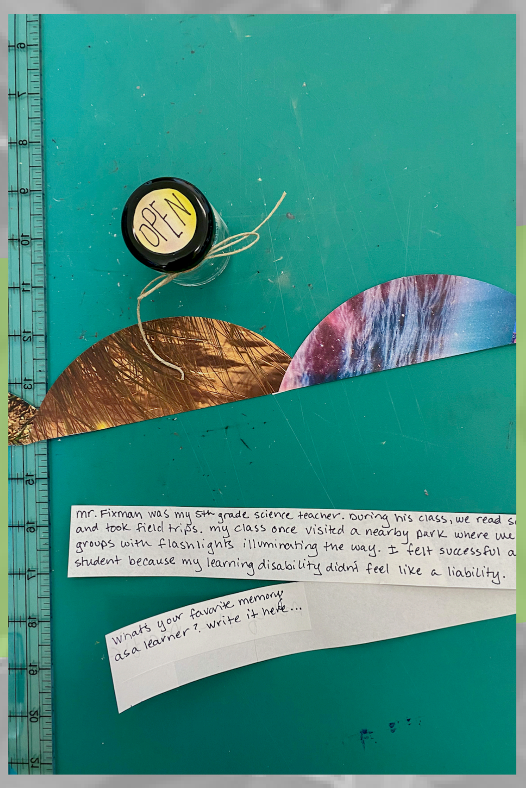
Chasing charms as concept (a) produces methodologies like reading with poststructural philosophy, writing with (and listening to) the Critical Studies scholar, walking with a psychoanalytic scholar and (b) invites thinking/creating and living/becoming differently.

FYAP Accomplishments:

Two article manuscripts submitted to international peer-reviewed journals: *IMAG* and *Qualitative Inquiry.*

Next Steps:

A co-authored literature review with a graduate assistant focused on local folklore and black magic will work as a creative thought project to consider how researchers and educators might explore a sensibility of creating and becoming in qualitative inquiry.



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Particle-Gamma Coincidences for Nuclear-Astrophysics Experiments at the FSU Super-Enge Split-Pole Spectrograph

Mark-Christoph Spieker; Department of Physics; John D. Fox Superconducting Linear Accelerator Laboratory*

Neutron-star mergers and *r* process

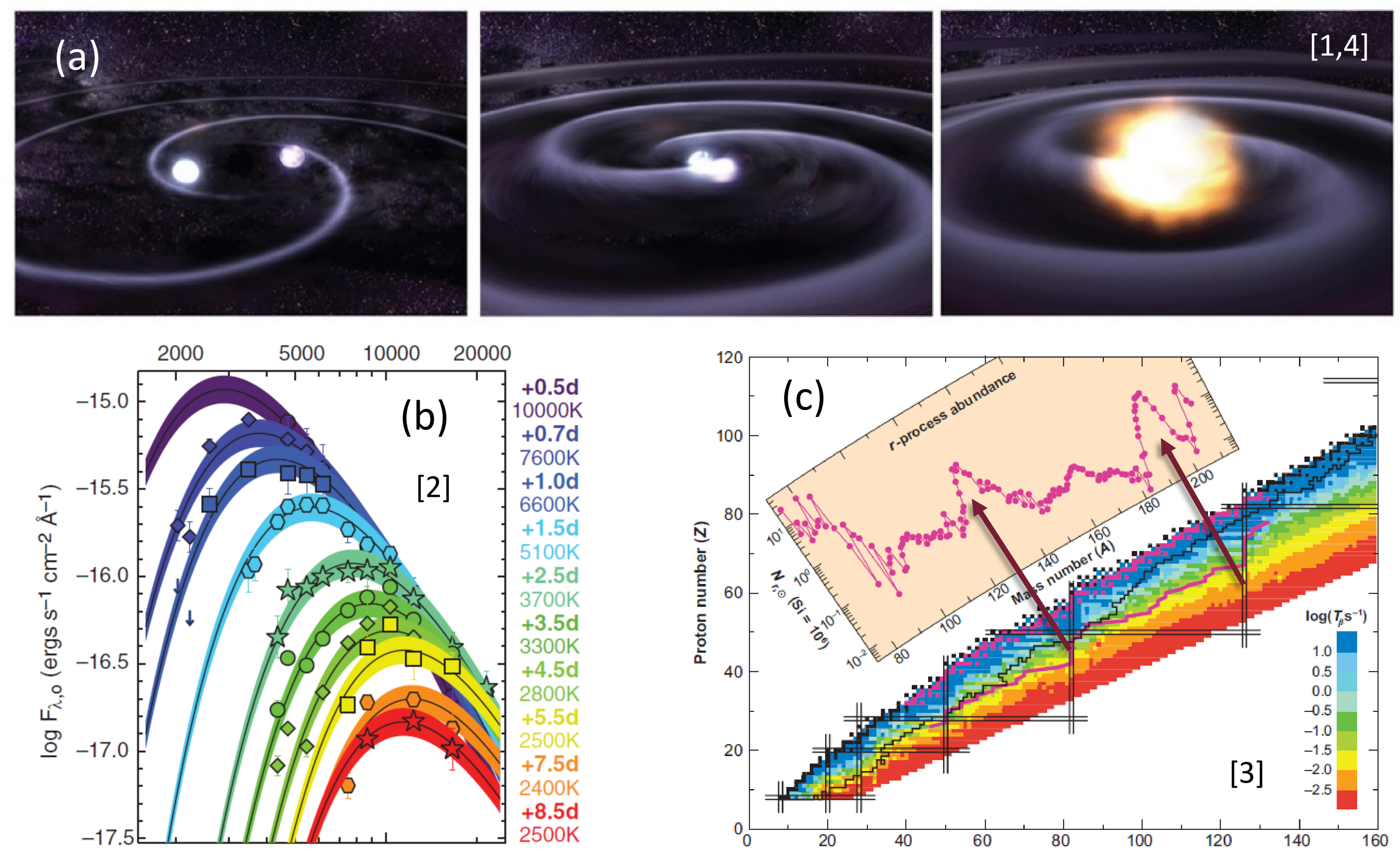
- First multi-messenger detection of a binary neutron-star merger [1].
- Evidence for synthesis of lanthanides in subsequent kilonova [2].

→ First direct evidence that neutron-star mergers could be one of the main sites for the rapid neutron-capture, i.e. *r* process.

- All neutron-rich nuclei far off the valley of β stability are synthesized in neutron-capture reactions and subsequent β decays during the *r* process [3].

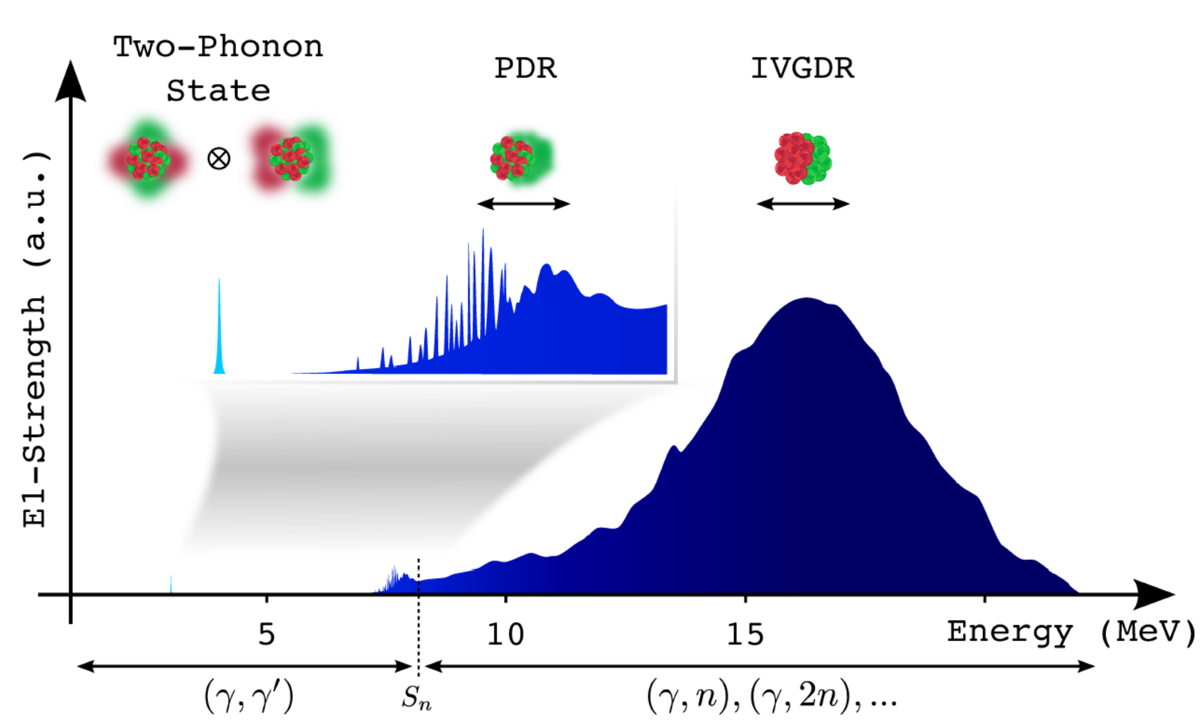
→ Nuclear Physics provides critical input to understand the observed isotopic abundance pattern. The γ-ray strength function (γSF), dominated by dipole strength, is one major input for statistical model calculations of neutron-capture, i.e. (n,γ) rates [4].

Goal at FSU: Establish setup to measure γSF in neutron transfer with (d,pγ), which mimics the astrophysically relevant (n,γ) reactions.

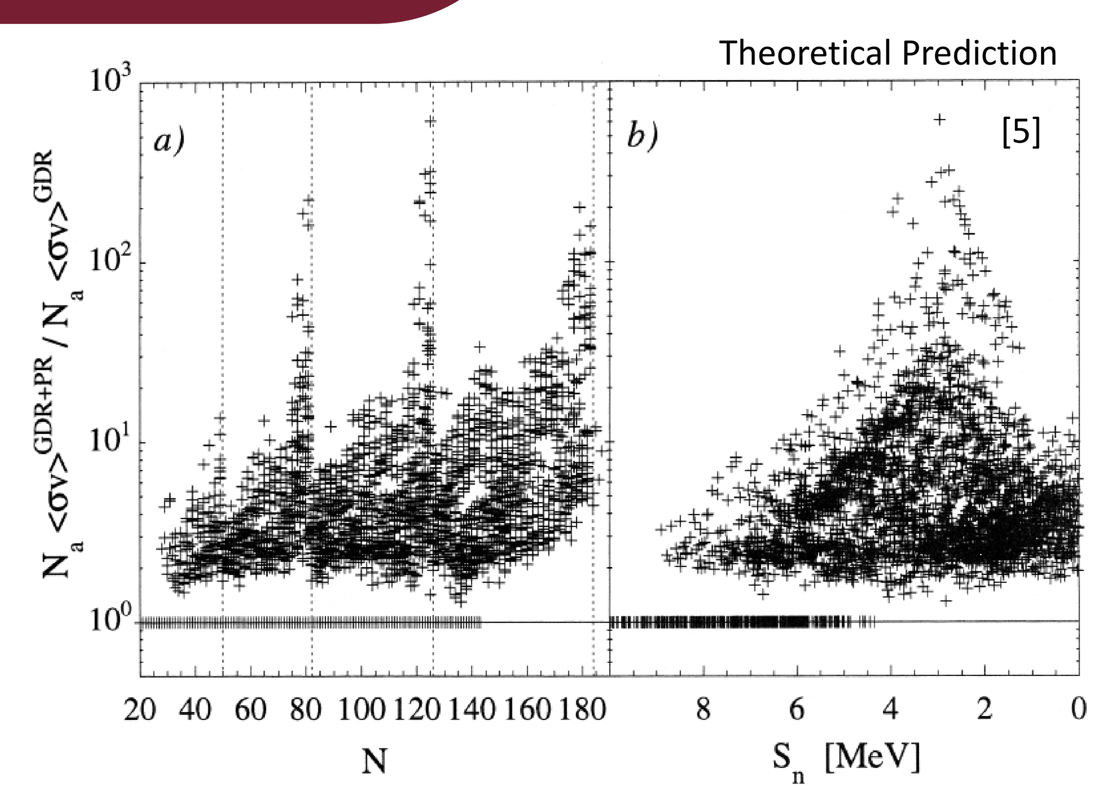


(a) Artist's depiction of a binary neutron-star merger, (b) Light curves measured after the merger event. (c) r-process abundance and nuclear chart where β half-lives are highlighted.

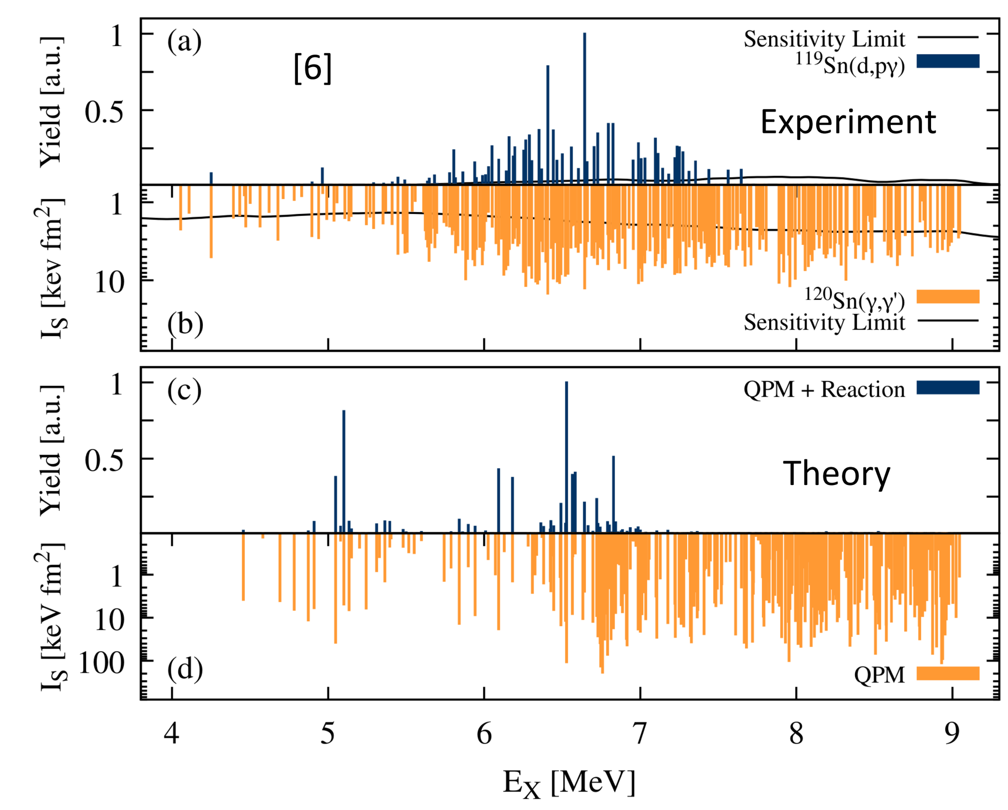
The low-energy electric dipole strength in atomic nuclei



Schematic electric dipole (E1) strength in atomic nuclei. Several modes can generate E1 strength. Three examples are shown, the coupling of $2_1^+ \otimes 3_1^-$ states, the Pygmy Dipole Resonance (PDR), and the Isovector Giant Dipole Resonance (IVGDR).

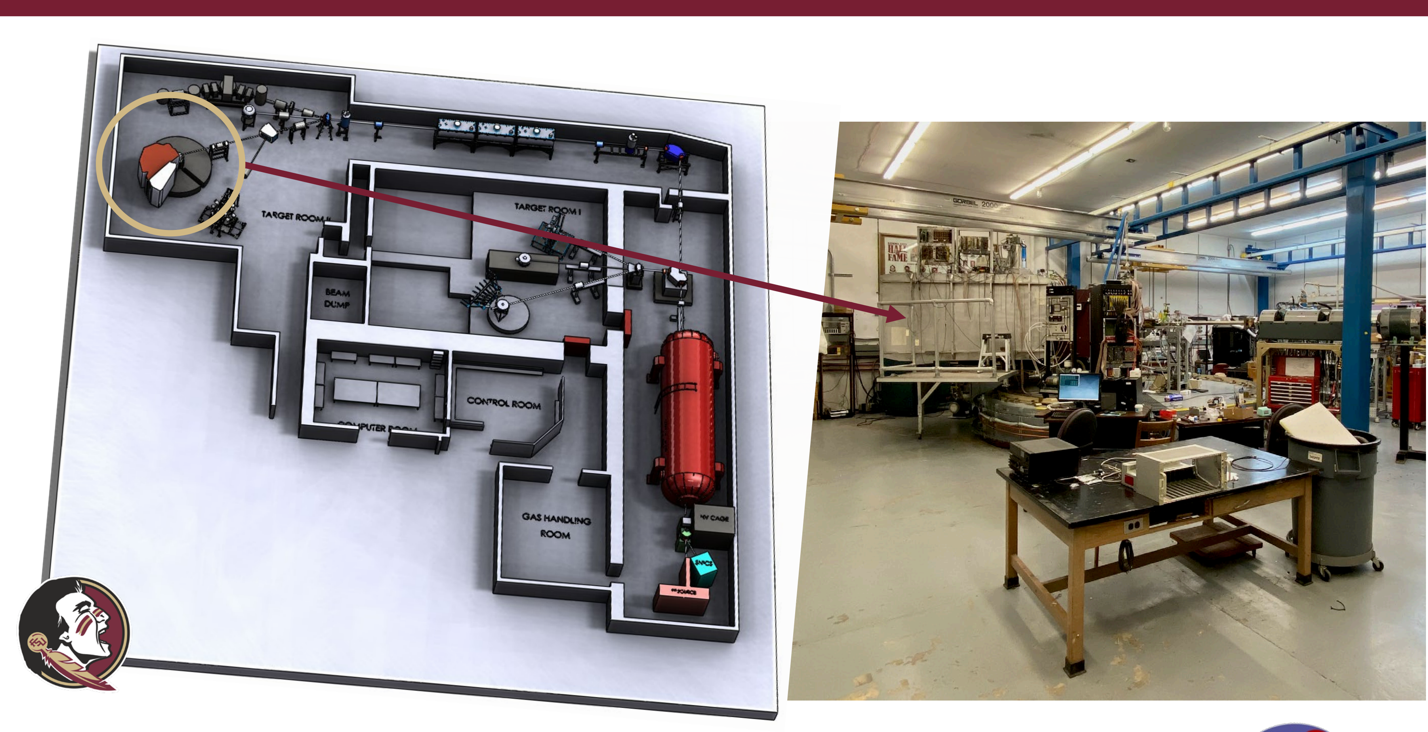


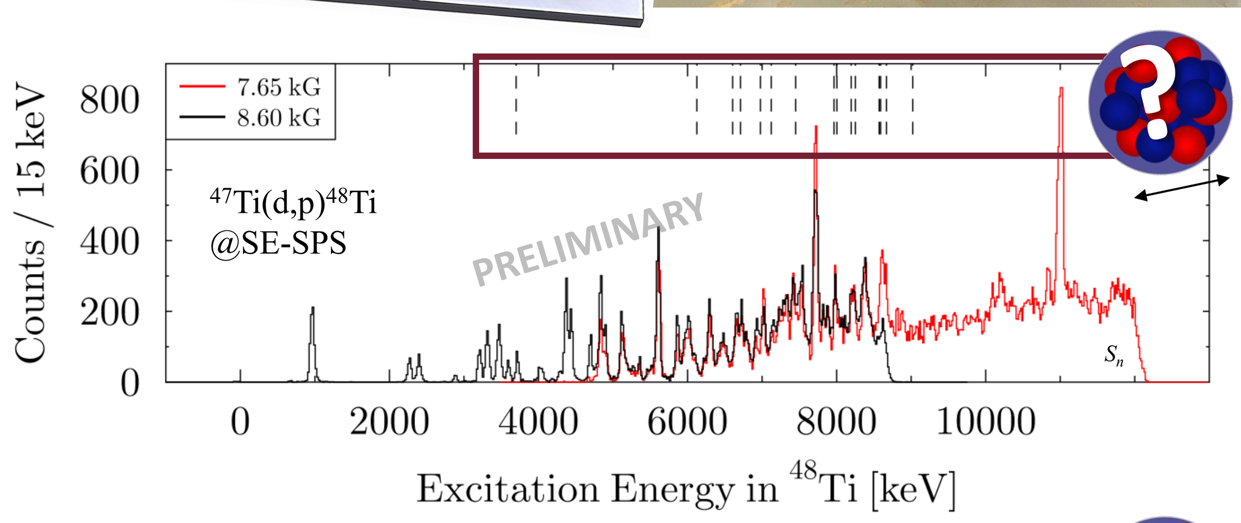
Influence of the PDR on neutron-capture rates [5]. The PDR can enhance neutron-capture rates to isotopes produced in the *r* process by up to a factor of thousand as compared to when only the IVGDR existed.

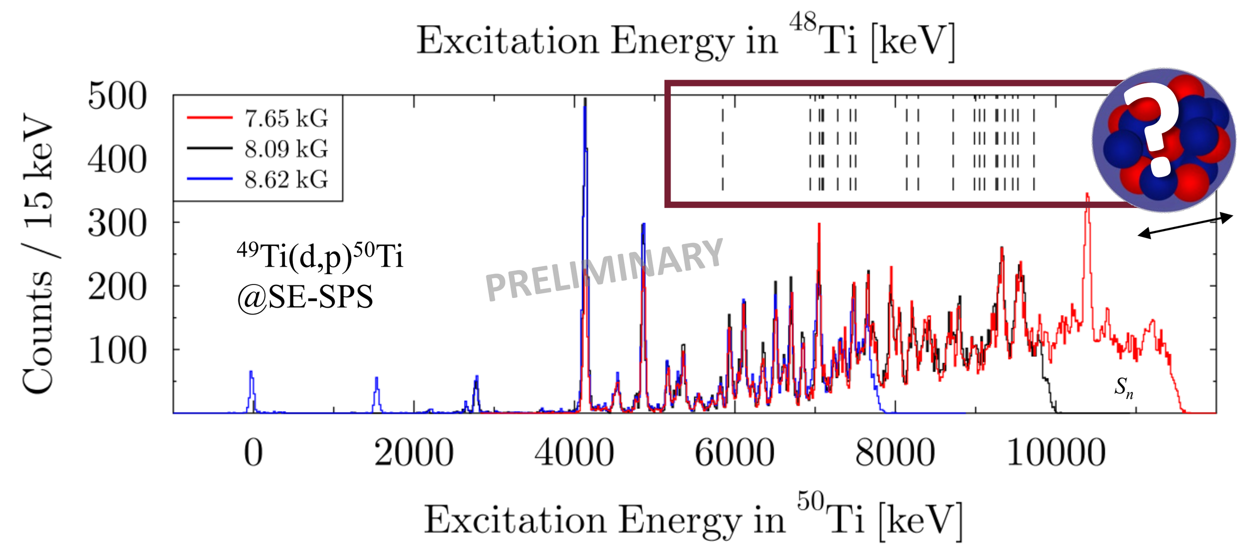


Population of the PDR in (d,p) neutron transfer mimicking (n,γ) neutron capture. Only the lower group of 1⁻ states is populated in (d,p) indicating that not the complete strength is important for (n,γ) [6].

First experiments at the SE-SPS and tests of the $CeBr_3$ γ-ray detectors

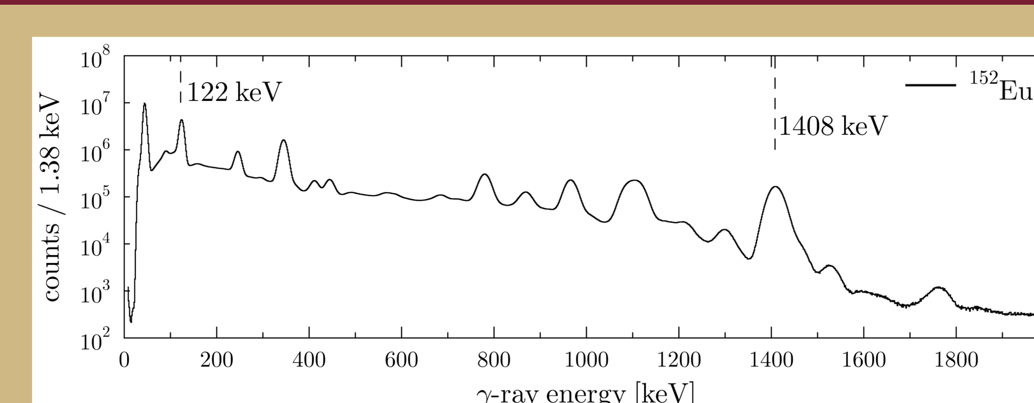




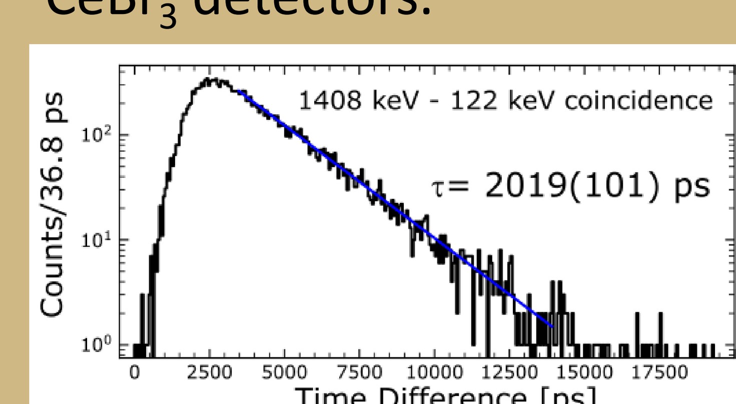


The Super-Enge Split-Pole Spectrograph (SE-SPS) at the Fox Laboratory and results from first (d,p) test experiments. For ^{48,50}Ti, excited states are observed at energies of known PDR states (dashed lines). Particle, i.e. proton spectra were recorded with the SE-SPS at different magnetic field strengths.

From design to construction.
A new scattering chamber was designed and constructed at FSU. The new chamber was tested, the $CeBr_3$ γ-ray detectors positioned around it and characterized. Data from tests with a ^{152}Eu calibration source are shown to the right.



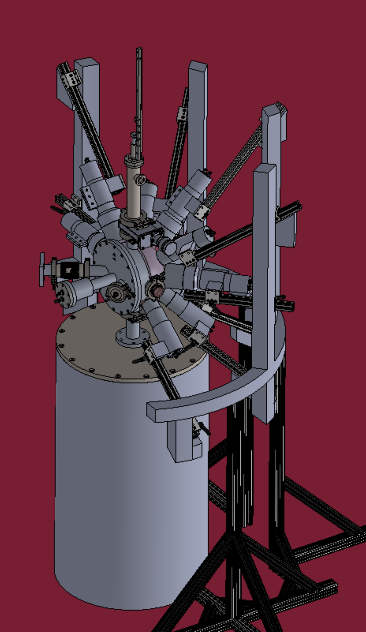
^{152}Eu γ-ray spectrum measured with the $CeBr_3$ detectors.



Project of FSU Physics Graduate Students: A.L. Conley, B. Kelly

Lifetime determination of the 122-keV state in ^{152}Sm populated in the decay of ^{152}Eu via the 1408 keV - 122 keV cascade.

Future plans with CeBrA+SE-SPS at FSU



- The construction of a full array consisting of 13 $CeBr_3$ detectors will be proposed (CeBrA; left: CAD drawing).
- Experiments are planned to understand the emergence of the PDR above neutron number N = 28.
- The (d,pγ) reaction will be used to systematically study the population of the PDR in different mass regions and to understand how it affects (n,γ) rates.

[1] B. P. Abbott *et al.*, The Astrophysical Journal **848**, L12 (2017)
[2] M. R. Drout *et al.*, Science **358**, 1570 (2017)
[3] C. Sneden *et al.*, Ann. Rev. Ast. Ap. **46**, 241 (2008)
[4] A. Larsen *et al.*, Progress in Particle and Nuclear Physics **107**, 69 (2019)
[5] S. Goriely, Physics Letters B **436**, 10 (1998)
[6] M. Weinert, M. Spieker, G. Potel, N. Tsoneva, *et al.*, *submitted for publication*

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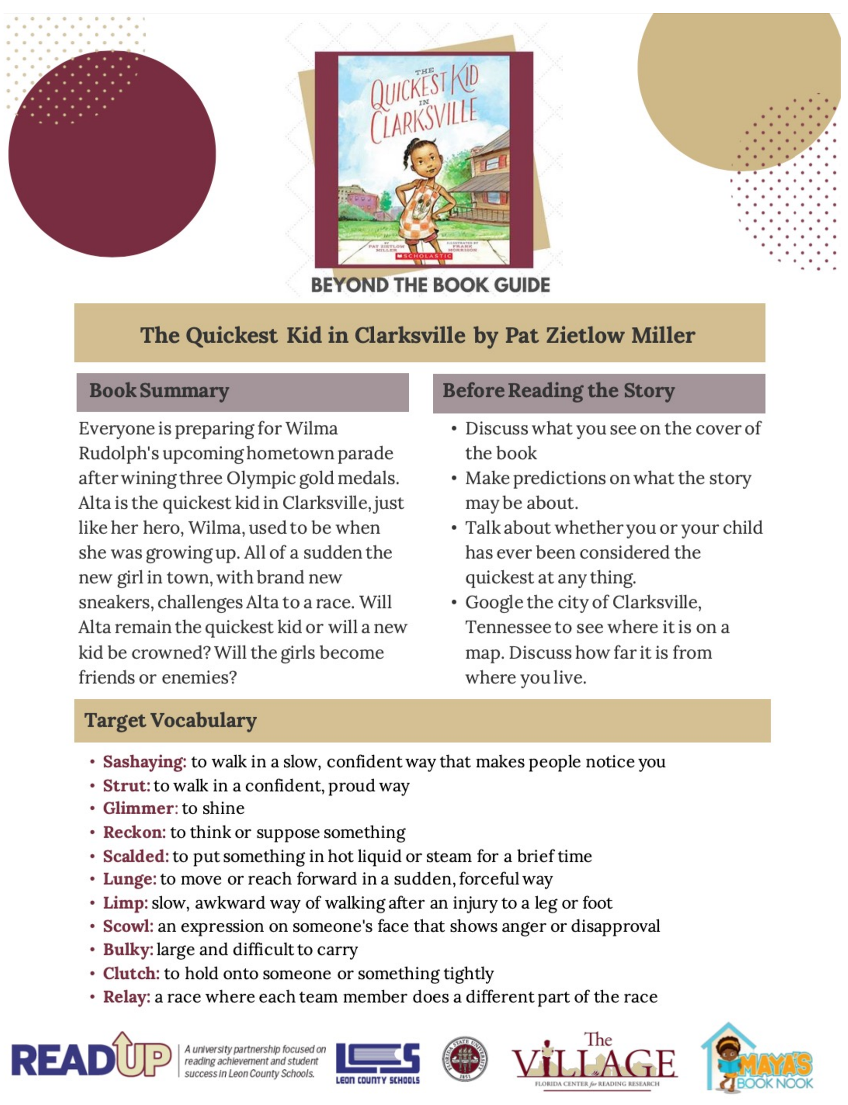
Research supported by FSU, the FYAP program, the Department of Physics, and through NSF grant No. PHY-2012522.



BEYOND THE BOOK GUIDE

The Quickest Kid in Clarksville by Pat Zietlow Miller

Book Summary

Everyone is preparing for Wilma Rudolph's upcoming hometown parade after wining three Olympic gold medals. Alta is the quickest kid in Clarksville, just like her hero, Wilma, used to be when she was growing up. All of a sudden the new girl in town, with brand new sneakers, challenges Alta to a race. Will Alta remain the quickest kid or will a new kid be crowned? Will the girls become friends or enemies?

Before Reading the Story

- Discuss what you see on the cover of the book
- Make predictions on what the story may be about.
- Talk about whether you or your child has ever been considered the quickest at any thing.
- Google the city of Clarksville, Tennessee to see where it is on a map. Discuss how far it is from where you live.

Target Vocabulary

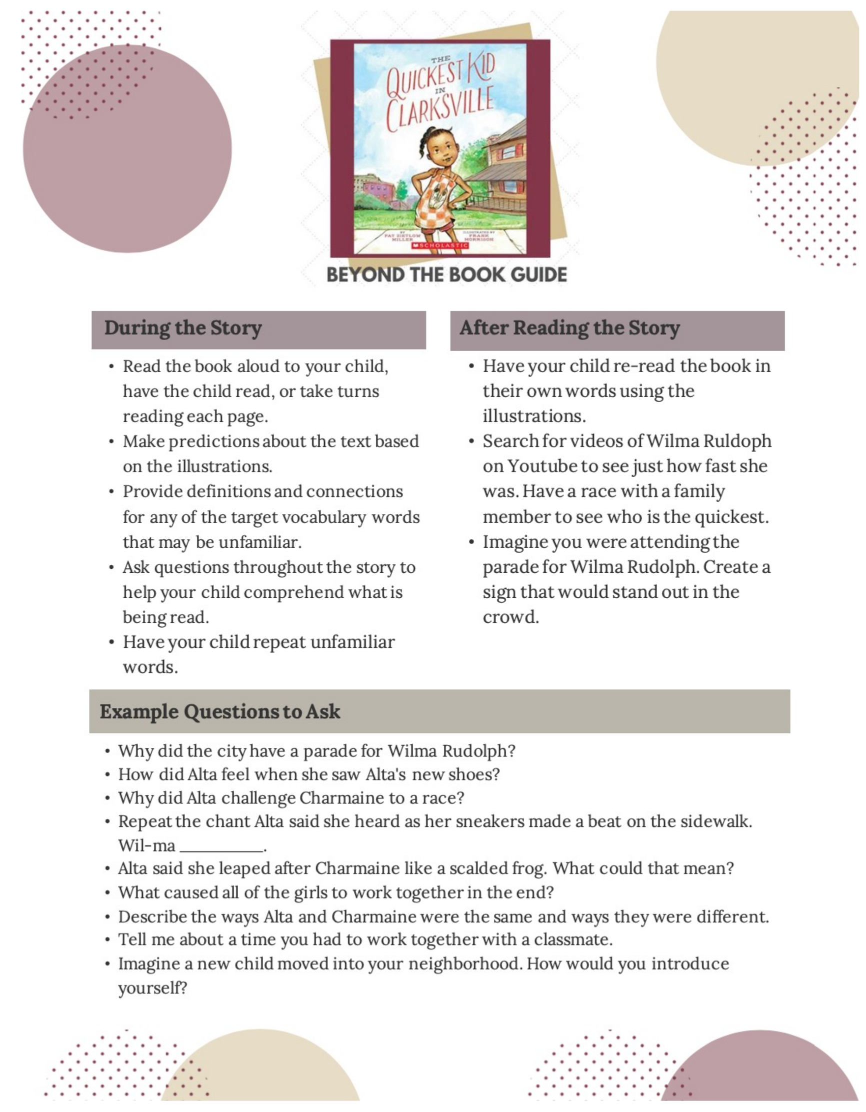
- **Sashaying:** to walk in a slow, confident way that makes people notice you
- **Strut:** to walk in a confident, proud way
- **Glimmer:** to shine
- **Reckon:** to think or suppose something
- **Scalded:** to put something in hot liquid or steam for a brief time
- **Lunge:** to move or reach forward in a sudden, forceful way
- **Limp:** slow, awkward way of walking after an injury to a leg or foot
- **Scowl:** an expression on someone's face that shows anger or disapproval
- **Bulky:** large and difficult to carry
- **Clutch:** to hold onto someone or something tightly
- **Relay:** a race where each team member does a different part of the race

READ UP | A university partnership focused on reading achievement and student success in Leon County Schools. Leon County Schools. The Village, Florida Center for Reading Research. Maya's Book Nook

Decreasing the Summer Slide Through an At-Home Reading Program

Lakeisha Johnson, PhD, CCC-SLP

Assistant Professor | School of Communication Science & Disorders



BEYOND THE BOOK GUIDE

During the Story

- Read the book aloud to your child, have the child read, or take turns reading each page.
- Make predictions about the text based on the illustrations.
- Provide definitions and connections for any of the target vocabulary words that may be unfamiliar.
- Ask questions throughout the story to help your child comprehend what is being read.
- Have your child repeat unfamiliar words.

After Reading the Story

- Have your child re-read the book in their own words using the illustrations.
- Search for videos of Wilma Ruldoph on Youtube to see just how fast she was. Have a race with a family member to see who is the quickest.
- Imagine you were attending the parade for Wilma Rudolph. Create a sign that would stand out in the crowd.

Example Questions to Ask

- Why did the city have a parade for Wilma Rudolph?
- How did Alta feel when she saw Alta's new shoes?
- Why did Alta challenge Charmaine to a race?
- Repeat the chant Alta said she heard as her sneakers made a beat on the sidewalk. Wil-ma __________.
- Alta said she leaped after Charmaine like a scalded frog. What could that mean?
- What caused all of the girls to work together in the end?
- Describe the ways Alta and Charmaine were the same and ways they were different.
- Tell me about a time you had to work together with a classmate.
- Imagine a new child moved into your neighborhood. How would you introduce yourself?

Introduction

Poverty has continued to have persistent, negative impacts on language, literacy, and executive function development. Due to COVID-19 school closures, students missed up to six months of classroom instruction at the start of the 2020-2021 academic year. Consequently, the typical "summer slide" (loss that occurs in reading ability over summer months due to less time spent reading) was expected to be much worse for most students, and even greater among students living in poverty, who may experience disproportionately more barriers to continued learning outside of school. This learning loss is cumulative and accounts for 80% of the reading achievement gap (Alexander et al., 2007). However, the "summer slide" can be decreased by providing students with access to books, as well as increasing adult interactions around book reading.

The purpose of this project was to investigate a five-week, low-cost, low-tech, home-based summer reading program that promotes high-quality, caregiver-child engagement with books.

Method

PARTICIPANTS

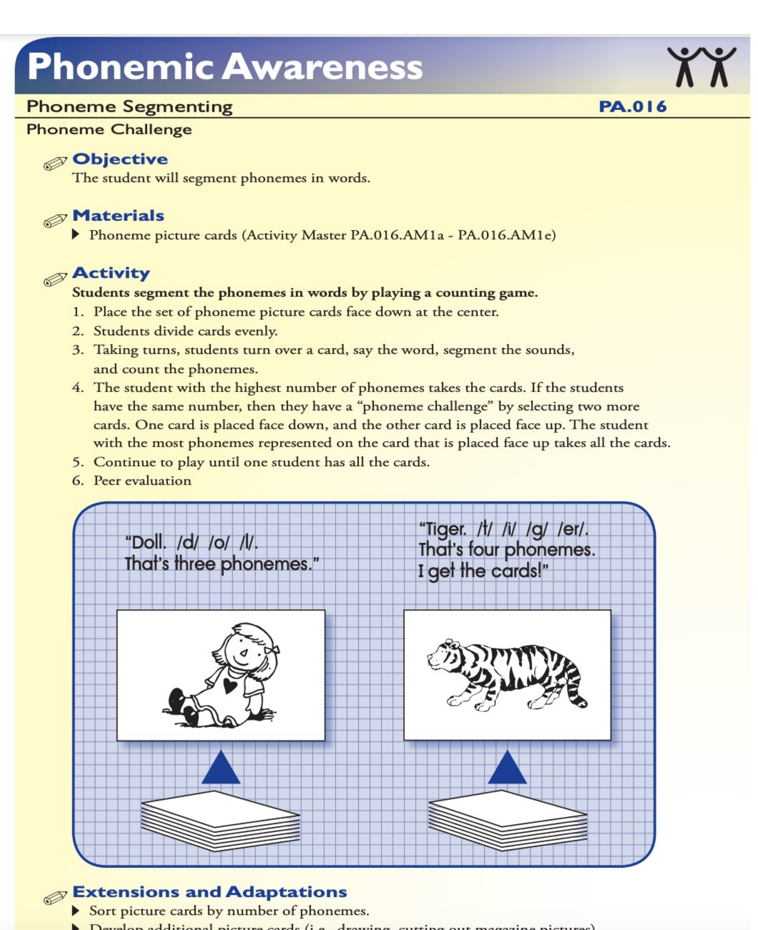
The goal was to recruit ~100 families from a charter elementary school serving boys of color from low-SES backgrounds.

PROCEDURES

Consenting families in Pre-K through 5th grade would participate in a five-week summer reading program receiving age-appropriate, diverse books and aligned storybook guides, evidenced-based literacy printable activities, and Youtube video demonstration models.

MEASURES

- Home literacy practices survey
- iReady student literacy benchmarks from spring 2021 and fall 2021
- Minnesota Executive Function Scale



Phonemic Awareness

Phoneme Segmenting — PA.016

Phoneme Challenge

Objective

The student will segment phonemes in words.

Materials

- Phoneme picture cards (Activity Master PA.016.AM1a - PA.016.AM1e)

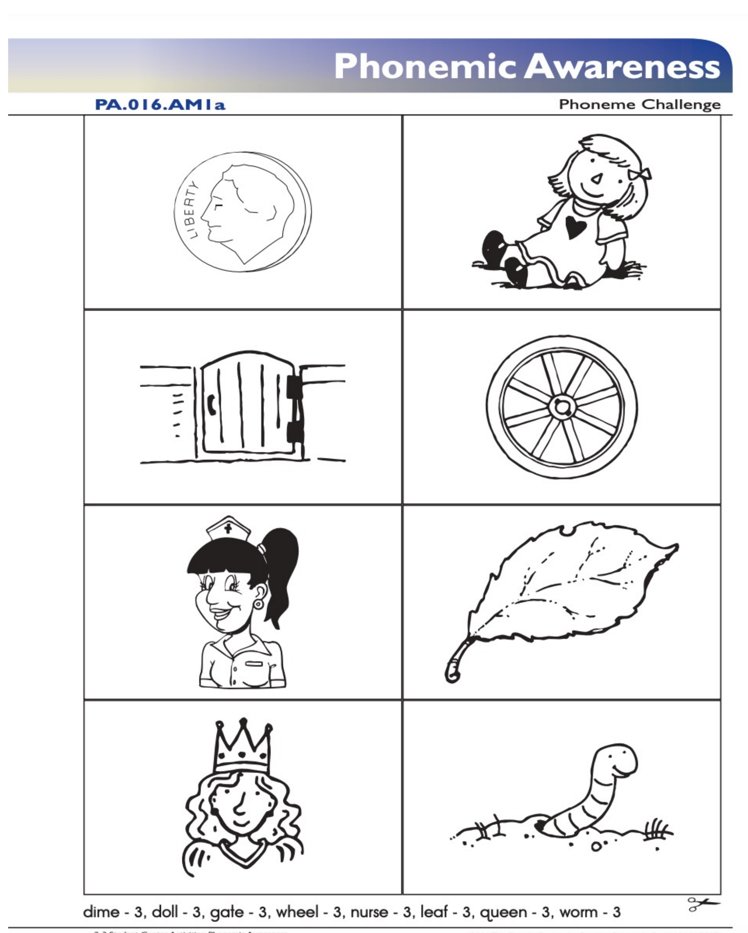
Activity

Students segment the phonemes in words by playing a counting game.

1. Place the set of phoneme picture cards face down at the center.
2. Students divide cards evenly.
3. Taking turns, students turn over a card, say the word, segment the sounds, and count the phonemes.
4. The student with the highest number of phonemes takes the cards. If the students have the same number, then they have a "phoneme challenge" by selecting two more cards. One card is placed face down, and the other card is placed face up. The student with the most phonemes represented on the card that is placed face up takes all the cards.
5. Continue to play until one student has all the cards.
6. Peer evaluation

Extensions and Adaptations

- Sort picture cards by number of phonemes.
- Develop additional picture cards (i.e., drawing, cutting out magazine pictures).



Phonemic Awareness

PA.016.AM1a — Phoneme Challenge

dime - 3, doll - 3, gate - 3, wheel - 3, nurse - 3, leaf - 3, queen - 3, worm - 3

2-3 Student Center Activities: Phonemic Awareness — 2006 The Florida Center for Reading Research (Revised July, 2007)

Sample literacy activity from the Florida Center for Reading Research Student Center Activities repository.

Challenges Faced

Unfortunately, many challenges were faced when it came to recruitment. It is hypothesized that due to an abnormal pandemic school year, caregivers did not want to commit to a summer project.

The Pivot

The proposed FYAP project was an extension of the PLEASE READ pilot completed during Summer 2020 to respond to the needs of families after school closures due to the pandemic. Once it was determined that enough participants could not be recruited, there was a pivot to analyzing data from the pilot project. The following goals were accomplished this summer:

- Database created to catalog shared caregiver-child storybook recordings pre- and post-intervention
- 2 master's students trained and gained reliability on the Systematic Analysis of Language Transcripts software
- 75% of pre-intervention recordings transcribed
- Codebook created to measure caregiver-child interactions (e.g., asking questions, defining new vocabulary, making predictions, book conventions, discussing background knowledge etc.)

Diverse books given to families in the PLEASE READ pilot study.

Future Research

Over the next semester, the shared storybook recordings will continue to be transcribed and coded to measure changes in caregiver-child interactions after the 5-week pilot of the PLEASE READ intervention.

Future research includes carrying out the original FYAP project to explore changes in caregiver-child engagement with books at various grade levels and to explore whether executive function skills mitigate the summer slide in children of color from impoverished backgrounds.

INSIDE OUT

Assessing *(and Designing)* Outdoor Spaces for Teaching & Learning in a Campus Environment

BACKGROUND AND OBJECTIVES

The benefits of gathering and learning outdoors go well beyond a reduction in disease transmission. Although physical health has been a focus of historic and current efforts to move schooling outside, it is only one of many advantages that can be gained from such a shift. Human learning comprehension, creativity, and mental health have all been proven to benefit from outdoor settings (Danks, 2010). At the same time, educators are looking to integrate a more active learning model for many areas of study. Outdoor classrooms and learning environments create opportunities for a variety of teaching models and methods to serve a diverse range of learning styles. In addition, these spaces contribute to the health of people and the planet through exposure to nature and reduced energy usage.

Previous research conducted on outdoor learning, and efforts to expand it, have been focused on younger children in primary schools. However, universities are a prime setting to diversify learning approaches and environments. They are also places in need of the mental health benefits that natural settings can provide. Even well before the Covid-19 pandemic, university students seeking mental health services for anxiety and depression was on the rise (James, 2017). Although not the only solution, incorporating additional time outdoors is one way to address this growing problem.

Because of its geographic location of the Southeastern United States, physical size of 300+ acres, and student population of over 40,000, Florida State University's main campus presents a unique opportunity for outdoor learning. The regional climate allows for almost three months worth of days (per calendar year) that are considered pleasant outdoors — based on temperature, sunshine, wind, precipitation, and humidity (Brettschneider, 2018). And here, a well-planned and carefully maintained campus of over 300 acres, students can encounter a number of locations for gathering with ample green views.

The goal of this research is to assess and map the underutilized spaces on (FSU's main) campus with the potential to be used, or adapted, for outdoor learning. The methodology measures the presence of a number of factors that contribute to a suitable and effective classroom setting outside.

LIMITATIONS

Siting (and designing) a space with little feedback or participation from user groups is not only difficult, it is a bad idea. Truly successful and inclusive built environments not only consider context, but allow for the input of the anticipated users. Although there was a small amount of feedback included in this study, ideally there would be more meaningful engagement on not just where to have these spaces, but also how they can best be programmed and designed for regular use.

One other limitation to this study includes the time frame. With activity levels being low during the summer, there was less opportunity to observe how the mapped spaces might typically be used by a fully populated campus.

METHODOLOGY

FSU's main campus not only has a large number of potential spaces for outdoor learning, there are also many existing locations that could serve in the same capacity. The PI mapped over 50 sites with potential for outdoor learning and gathering on campus. University greens, parking lots, and existing seating related to dining services were not included since their programs are already established and used accordingly. The goal is to expand upon existing opportunities for students and faculty to be outside, as opposed to replacing them for another purpose. Many of the originally mapped spaces were removed from the final list due to their location in a residential and/or remote zone of campus. The final number of mapped locations includes 20 existing spaces and 18 potential spaces for outdoor learning. These are the variables that were studied:

Proximity
- ● Adjacent to academic buildings currently used for classrooms

Privacy
- ● NOT (within or) directly adjacent to major pedestrian or vehicular circulation route
- ○ Near (within sight) to major pedestrian or vehicular circulation route; or within/adjacent to minor route

Acoustics
- ● Ambient background noise sample averages ≤ 50 dB on recording *(using DecibelX app - sample minimum of 30 seconds on a sunny summer day)*

Protection (Sun)
- ● Shade from nearby buildings or trees
- ○ Partial shade (varies seasonally and/or hourly) from nearby buildings or trees

Protection (Rain)
- ● Full overhead cover
- ○ Partial overhead cover

Accessibility
- ● ADA surface for physical access (existing hardscape and no steps or steep slopes) *
- ○ Could become accessible with reasonable alterations (minor grading and/or path)

Seating Infrastructure
- ● Existing seating present in the form of steps, seat walls, chairs, or benches

Utilities (Electric)
- ● Power outlet visible in space or within 25'
- ○ Evidence of underground power lines (lighting in space)

Utilities (Water)
- ● Water tap visible in space, or within 25'
- ○ Evidence of underground water lines (irrigation in space)

Airflow
- ● Good airflow, not tight or contained space
- ○ Open air above but limited through space

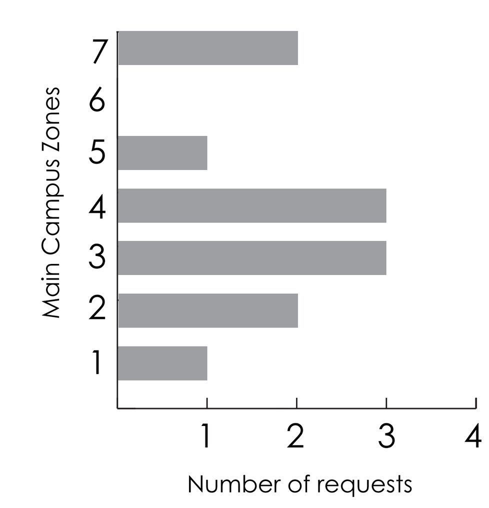
Nature Setting/Green Views
- ● Vegetation in space or nearby and clearly visible from the space
- ○ Green view only from only one vantage point; minimal, or distant

NO Tree Root Mitigation
- ● Area NOT within the Critical Root Zone (CRZ) of any large, existing tree

** Hardscapes could have microclimate issues (heat island effect)*

MAP ZONES

As part of this research, the PI was put in contact with a small group of current FSU instructors who have expressed an interest in opportunities (and tools) to teach outdoors. In an effort to understand where these resources might already be requested, a zone map of campus was presented to the group. They were asked in which of the seven zones they would prefer an outdoor classroom or some other opportunity to teach outside. The bar graph at right shows the number of votes for each zone, with the most occurring in central campus, Zones 3 and 4.



EXISTING SPACES
Summary of Factors

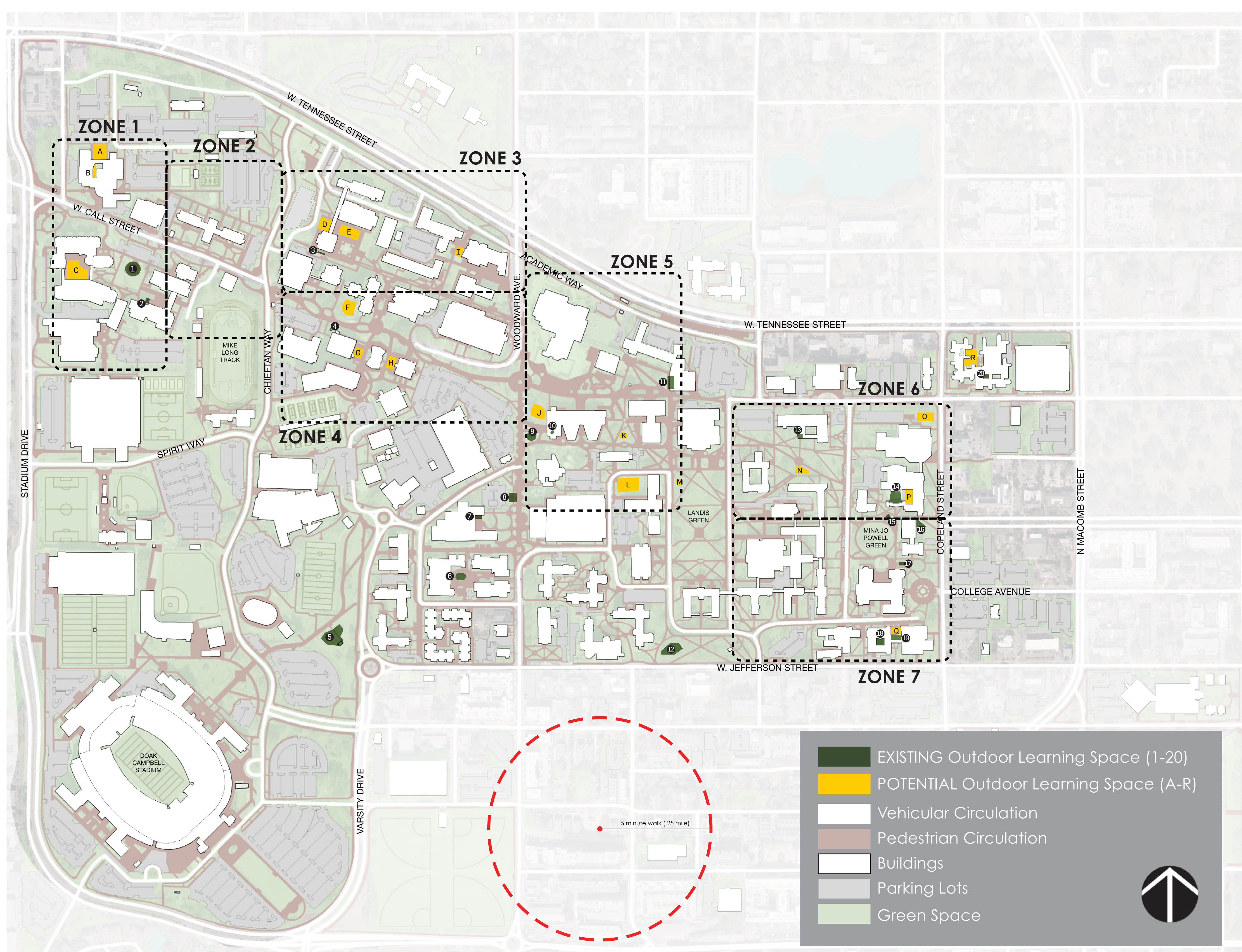
SIZE*	Map ID	SITE	Proximity	Privacy (from major circ)	Acoustics	Protection (shade)	Protection (roof)	Accessibility	Seating Infrastructure	Electric	Water	Airflow	Nature setting/Green views	NO Tree root Mitigation req	SCORE (out of 12)
1500 sf	19	Diffenbaugh breezeway	●	○		●	●	●	●	●	●	●		●	9.5
1500 sf	18	Williams courtyard	●	●		○		●	●	●	●	○	○	●	8.5
4250 sf	5	Sustainable Garden		●	●	○	○	○	●	●	●	●	●		8.5
~250 sf	13	Sandels covered patio	●	○	●	●	●	○	●			●	○	●	8.5
700 sf	20	FAB interior courtyard west	●	●	●	○		○	●	●		○	○	●	8
400 sf	10	HCB breezeway	●			●	●	●	●	●		○		●	7.5
< 1000 sf	2	Corner seatwall (Warmath)	●	○		○		○	●	●	○	●	○	●	7.5
800 sf	7	H&W terraces	●		●	○			●	●	○	●	○	●	7.5
800 sf	8	Wellness Garden	●	○				●	●		●	●	●	●	7.5
275 sf	4	Hoffman corner seating	●	●		○		●	●		○	●		●	7
~3500 sf	14	Kuersteiner amphitheater	●	○	●	○			●	●		●	○	●	7
300 sf	15	Friendship Garden	●	○		●		○	●		●	●	●		7
~4000 sf	1	College of Med. Labyrinth	●	○				○	●	○	○	●	○	●	6.5
~2500 sf	17	Westcott shady plaza	●	○	●	○		●	●			●	○		6.5
950 sf	3	Keen trellis seating	●			○		●	●		○	●		●	6
1800 sf	6	The Courtyard Council oak	●	○	●	○		○	●			●	○		6
5000 sf total	16	Kellogg seatwall	●	○	●	○			●			●	●		6
2500 sf	11	Rovetta A plaza	●			○	○		●	●		○	○	●	6
1800 sf	9	Legacy oak	●			○		○	●			●	●		5
5000 sf	12	Jefferson Street pines		○	●	○						●	●		4

POTENTIAL SPACES
Summary of Factors

SIZE*	Map ID	SITE	Proximity	Privacy (from major circ)	Acoustics/Ambient noise	Protection (shade)	Protection (roof)	Accessibility	Seating Infrastructure	Electric	Water	Airflow	Nature setting/Green views	NO Tree root Mitigation req	SCORE (out of 12)
1200 sf	B	Stone courtyard (bottom)	●	○	●	○			●	○	●	○	●	●	8
10000 sf	C	College of Med. Courtyard	●	●		○		○		●	●	●	○	●	7.5
4000 sf	D	Keen concrete plaza	●	●	●	○		●		○	○	●		●	7.5
5000 sf total	R	FAB courtyard	●	●		○			●	○	●	●	○	●	7.5
6000 sf	A	Stone Bldg. terraces	●	●	●				●	○		●	○	●	7
1200 sf	K	Bellamy oaks	●	●	●	●		○		○		●	●		7
6000 sf	N	Sandels oaks	●	●	●	●		○		○		●	●		7
1000 sf	Q	Diffenbaugh ground	●	○		○	○		●	●	●	○		●	7
3500 sf	H	Rogers grid hardscape	●	●		○		○	●		○	●	○	●	7
1000 sf	I	EOAS hillside	●	○		○				●	●	●	○	●	6.5
6500 sf	F	Ditmer green space	●	○		●		○	●	○		●	●		6.5
1500 sf	P	Kuersteiner patio	●	○		○		●	●	●		○		●	6.5
1000 sf	M	Landis west shade	●	○	●	●		○				●	●		6
~2500 sf	O	Houseright shade	●		●	●		○		○		●	●		6
5600 sf	E	Richards raised planters	●	○		○			●	○	○	●	○		5.5
5000 sf	J	HCB oaks	●	●		●		○				●	●		5.5
7500 sf	L	Montgomery bowl	●					○		○		●	●	●	5
2000 sf	G	Hoffman lower plaza	●	○		○				○		●	○	●	5

☐ Factors related to Utilities — Factors directly linked to location *(Difficult or unlikely to change)* — Factors most affected by design *(Less difficult, more likely to change)*

***Roughly 8-10 sf needed per person for seated spacing (without desk surface)**



FINDINGS AND OUTCOMES

The PI gathered data on foot for over 35 hours from May to August of 2021. 20,000 steps was the average count for a typical day walking a section of campus. GIS mapping facilitated the documentation of accurate locations, along with a method to measure the size of the spaces, and keep track of the initial variables.

After mapping over 50 sites with 12 variables, 20 existing spaces and 18 potential spaces were selected for the final comparison charts. Subsequent visits to most locations were required to provide the detailed information on Acoustics and Utilities. Of the total 38 sites, 26 have more than half of the factors for a suitable outdoor learning environment. All but one of the existing spaces have some seating infrastructure in place. And airflow and proximity were consistently good for most of the locations.

NEXT STEPS

This research provides a foundation to expand upon both the typologies and the design of outdoor learning spaces on FSU's campus. Additional feedback from instructors, along with information from the registrar on size, location, and classification of courses will help guide the selection of sites to move into a conceptual design phase.

Other factors, such as historical use or significance of the mapped locations, will also be helpful to inform both the suitability of the program and the site's design. As with any design solution, there is no "one size fits all." The best settings for outdoor learning will not only be comfortable and suitable, but will also further enrich the campus environment with their own unique character.

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