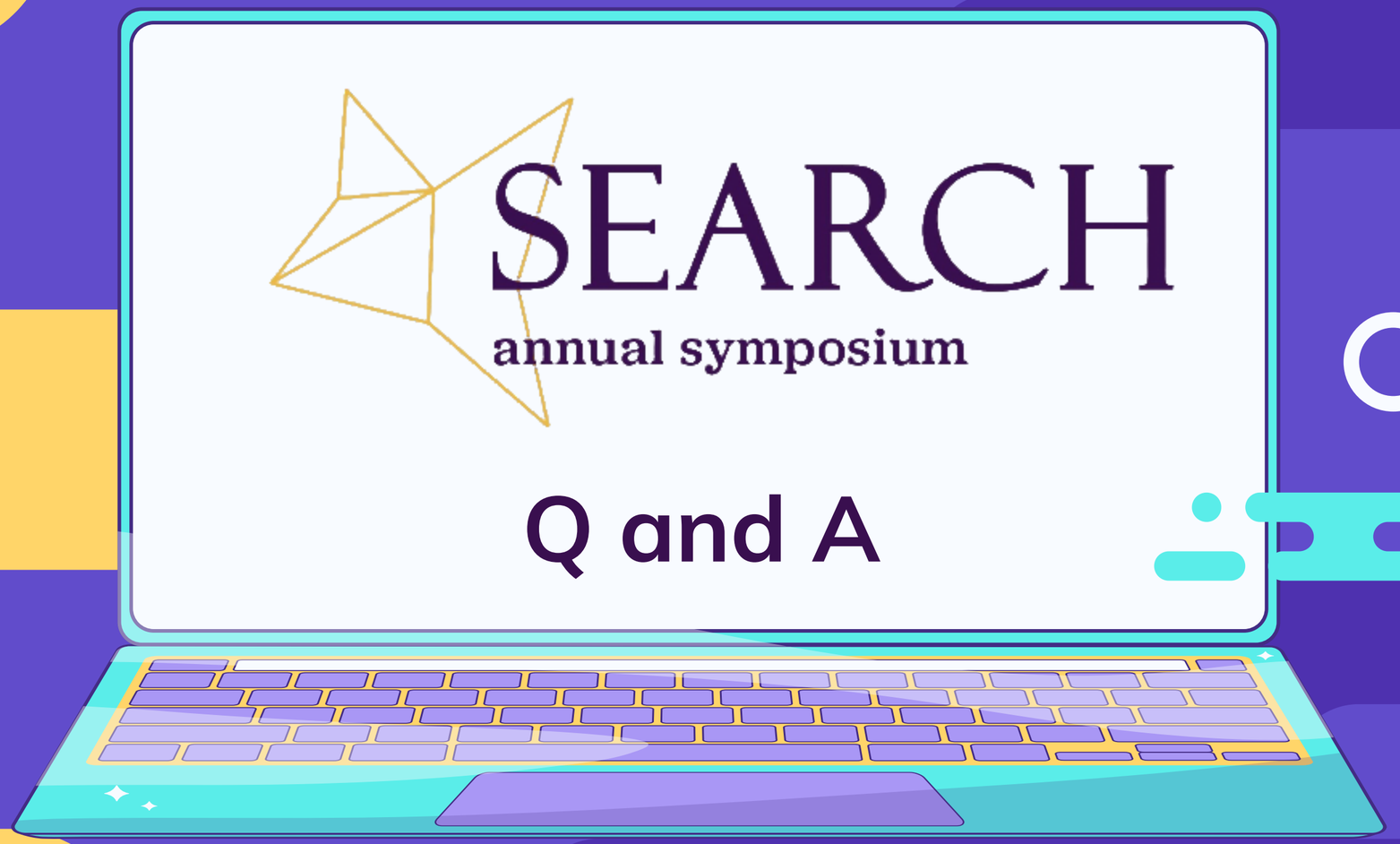

SEARCH
annual symposium
Q and A

SEARCH
annual symposium

STUDENT POSTER SUBMISSIONS

DUE Tuesday, March 19
by 5 p.m.

Student Poster Submission Specifications

DUE?

- Poster PDF **due Tuesday, March 19 by 5 p.m.** with an abstract for your poster (summary of what it covers)

WHEN?

- Student Showcase is at 8 p.m. on April 9, 2024

WHERE?

- Luce Auditorium in the CLC

WHAT SHOULD I WEAR?

- Business professional attire

WHAT SHOULD I BRING TO THE POSTER SESSION?

- Prepared talking points about the poster.

Student Poster Submission Specifications

SIZE and FORMAT:

- 3’ x 2’ OR 4’ x 3’ (size has to be correct) ****Must submit in .pdf format**
- The title should be clear and central with the AU logo, your name, and your faculty sponsor’s name
- Clear font, no smaller than Arial 24 pt.
- Each student is limited to 1 poster
- Poster-only submissions are not eligible for awards
- Can be submitted by a group
- IF your poster is already printed -- turn in by March 19

POSTER CONTENT CONSIDERATIONS

Clear and Concise

Relevant and Significant

Clear Purpose

Essential

Organized

POSTER DESIGN AND LAYOUT CONSIDERATIONS

- Balance
- Alignment
- Colors
- Consistency
- White Space

POSTER GRAPHICS CONSIDERATIONS

Diagrams

Photographs

Charts

Artwork

On Morally Evaluating Videogames

WillemHanssen | Mentor: SydneyPenner, PhD.

ASBURY UNIVERSITY
Established 1890

The Philosophical Conundrum

Most people cast no negative judgement upon virtual murder, but most people would cast extensive judgement upon virtual rape/sadism/pedophilia/cannibalism. In real-life, however, most people would cast severe judgement on both murder and rape/sadism/pedophilia/cannibalism. Clearly, there is some sort of discontinuity here. Why do people's judgements about the virtual and real actions line up in one case but diverge in the other?

MoralEvaluationofthe Mind

- There are two parts to the mind: *random thoughts* and *fantasies*. It is *fantasy* which can be morally evaluated.
  - A *fantasy*Ihavedefined to be using your mind's interface, which is your imaginative power, to direct your creation of yourself in your mind, or another creation of your mind's, to perform an act in your mind in accord with your desire, while not simultaneously performing the same act in real life.
- On thebacks of scripture, renowned bible scholars, and philosophers throughout the ages, we can say with certainty that *fantasies*are subject to moral evaluation.

The Matthew Principle

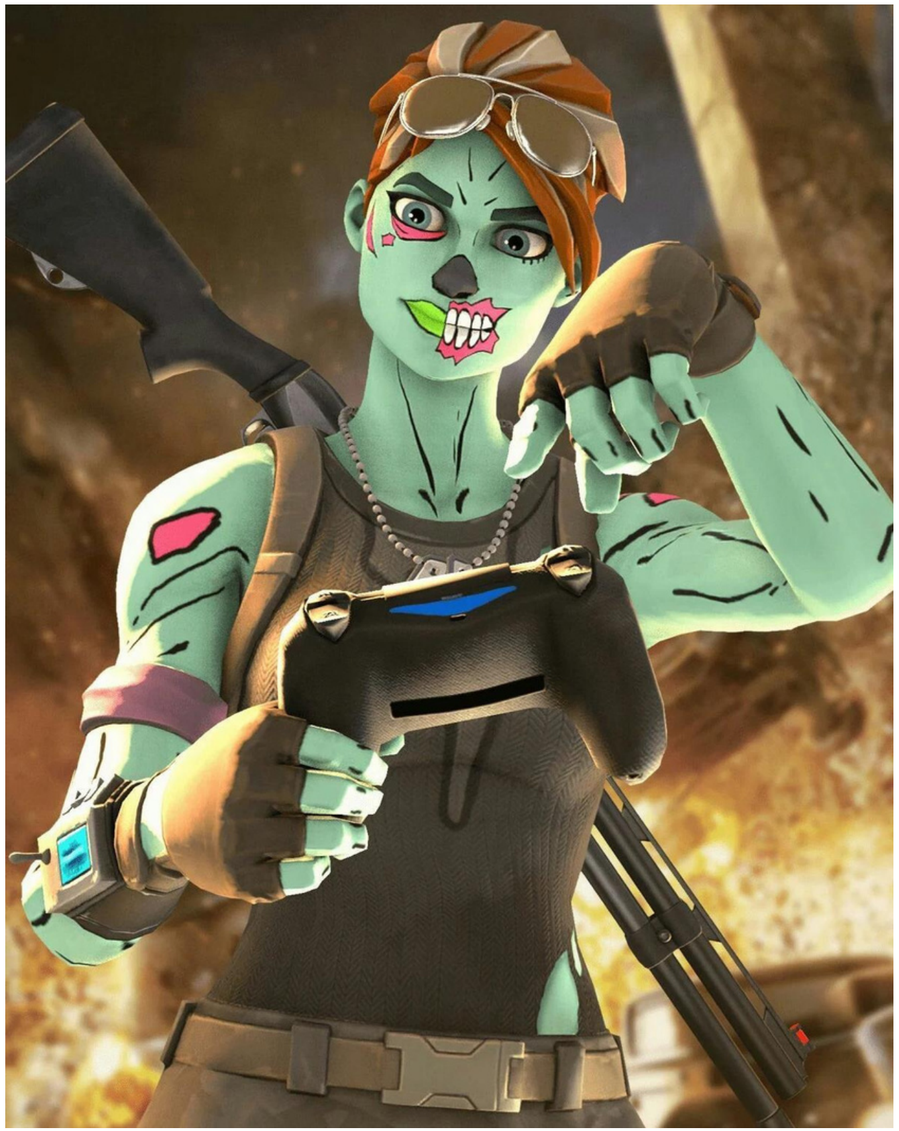
- The above discussion on morally evaluating *fantasies*can be reduced to a general rule, which I have dubbed the Mathew Principle: "anything you ought not do in real life; you ought not fantasize".

Moral Evaluation of Videogames

- "Video games…are electronic games that involve interaction with a user interface or input device…to generate visual feedback. This feedback mostly commonly is shown on a video display device" ("Video Game")
- Iarguethat videogames themselves cannot be immoral, rather, it is the actions within the game that contain the unsettling *behavior* that we find morally reprehensible.
- Iarguethat *fantasizing* and *playing a videogame*are, what I have called, *similar*. That is, these two things share properties; namely, the Matthew Principle.

TheMatthewPrinciple (Again)

- Because we have determined that *fantasizing* and *playing a videogame* are similar, thereby sharing the Matthew Principle, we can say: "anything you ought not do in real life; you ought not do in a videogame".



Objections and Responses

- The "outlet" argument –This argument states that virtual actions arean"outlet" of repressed, unwanted social behavior; sexual, violent or oftentimes both.
- On thecontrary, the academic literature seems to suggest that instead of being an "outlet", immoral virtual behavior increases this type of behavior in real-life.
- "Enjoyingthecompetition, rather than the kill." –This argument states that as long aspeople are playing the game for the competitive nature of the game, rather than the wickedness therein, it is not morally indecent.
- Onthecontrary, I ask the videogame player to play my fake (and disturbing) *Worse than Dahmer* game, which asks the players to rape and torture underage girls, for the sole purpose of beating your friends score, without feeling guilty. It is clear that competitiondoes not make something right or wrong, even in this context.
- Et Cetera….

Conclusion

- The aim of this paper was to settle the moral discontinuity felt about different kinds of unethical actions in videogames. This was accomplished by examining a telling passage from the Lord's Sermon on the Mount, which indicates that fantasies can be morally evaluated. From those arguments, I postulated a moral principle to evaluate fantasies, which was dubbed the Matthew Principle. By drawing parallels from fantasies to playing videogames, the two phenomena were considered similar. Thus, the Matthew Principle was set in terms of videogames. If this principle is sound, then it has dramatic implications for the gaming community. Gamersought to take notice and readjust their virtual activity. It is a matter of good and evil.

"AI-generated faces are now more trustworthy than real ones" *www.fastcompany.com*, statistics/. Accessed 17 Dec. 2022.
19 Feb. 2022, www.fastcompany.com/90723525/ai-generated-faces-have-
rossed-the-uncanny-valley-and-are-now-more-trustworthy-than-real-Keener, Craig S. Matthew. Downers Grove, Ill., Intervarsity Press, 1997.
ones. Accessed 6 Jan. 2023.
Luck, Morgan. "The Gamer's Dilemma: An Analysis of the Arguments for the Moral
American Bible Society. *The Holy Bible : ESV, English Standard Version Containing the* Distinction between Virtual Murder and Virtual Paedophilia." *Ethics and Information*
Old and New Testaments. New York, American Bible Society, 2007.*Technology*, vol. 11, no. 1, 11 Sept. 2008, pp. 31–36.

Aquinas, Thomas, *Summa Theologica*, translated by the Dominicans of the English Mann, William. "Inner-Life Ethics." *The Augustinian Tradition*, edited by Gareth B.
Province. New York, CosimoClassics, 2007.Matthews,Universityof California Press, 1999, pp. 140–166.
Augustine. *The Lord's Sermon on the Mount*., translated by J.J. Jepson, Ancient "More People Are Gaming in the U.S., and They're Doing so across More Platforms."
Christian Writers, edited by Johannes Quasten, S.T.D. and Joseph C. Plumpe, Ph.D., *NPD Group*, 20 July 2020, www.npd.com/news/press-releases/2020/more-peo
Newman Press, 1948.ple-are-gaming-in-the-us/. Accessed 17 Dec. 2022.

Bartel, Christopher. "Free Will and Moral Responsibility in Video Games." *Ethics and*"PROTECT Act of 2003" *www.govinfo.gov*, www.govinfo.gov/features/PROTECT-
Information Technology, vol. 17, no. 4, Dec. 2015, pp. 285–293.act. Accessed 2 Feb. 2023.
Carson, Donald A., et al. *The Expositor's Bible Commentary Volume 8, Matthew-Luke* : Schneider, F. W., Gruman, J. A., & Coutts, L. M. *Applied Social Psychology: Second*
With the New International Version of the Holy Bible. Vol. 8, Grand Rapids, Zondervan Edition.Thousand Oaks, CA: SAGE Publications, Inc, 2012.
Pub. House, 1984
. "Supreme Court Strikes Down Ban on 'Virtual Child Porn'", *CNN*, April 18, 2002,
France, Richard T. *The Gospel of Matthew*. Grand Rapids, Mich., Eerdmans, 2010 www.edition.cnn.com/2002/LAW/04/16/scotus.virtual.child.porn/.
Accessed 17 Dec. 2022.
"Global Video Games Market Research Report -Segmented By Device (Console, Mobile
And Computer), By Revenue Type (In-Game Purchase, Game Purchase And "Video Game." *Wikipedia*, Wikimedia Foundation, 26 Jan. 2019,
Advertising), By Age Group (Adult Games And Children Games), By Type (Online Video www.wikipedia.org/wiki/Videogame. Accessed 17 Dec. 2022.
Games And Offline Video Games) And By Region-2022 to 2027." *Market Data Forecast*,
January,2022, https://www.marketdataforecast.com/market-Wang, Chensi. "Deepfakes, Revenge Porn, and the Impact on Women." *Forbes*,
reports/video-games-market. Accessed 17 Dec. 2022.www.forbes.com/sites/chensiwang/2019/11/01/deepfakes-reven
ge-porn-and-the-impact-on-women/?sh=358de7771f53. Accessed 7
Goldbeck, Lauren, and Pew, Alex. "Violent Video Games and Aggression." *National* Jan. 2023.
Center for Health Research, 27 Mar. 2018, www.center4research.org/violent-
video-games-can-increase-aggression/. Accessed 13 Feb. 2023."World Internet Users Statistics and 2019 World Population Stats."
Internetworldstats.com, 2022, www.internetworldstats.com/stats.htm.
"GTA V Players Enjoy Finding Creative Ways to Kill NPCs." *TweakTown*, 21 Nov. 2016.Accessed 17 Dec. 2022.
www.tweaktown.com/news/55169/gta-players-enjoy-finding-creative-
ways-kill-npcs/index.html. Accessed 20 Dec. 2022.Wright, Paul J., et al. "A Meta-Analysis of Pornography Consumption and Actual Acts of
Sexual Aggression in General Population Studies." *Journal of Communication*, vol. 66,
Katatikarn, Jasmine. "Virtual Reality Statistics: The Ultimate List in 2022." *Academy ofmo*. 1, 29 Dec. 2015, pp. 183–205
Animated Art, 1970. https://www.academyofanimatedart.com/virtual-reality-

Empowering Teachersto Serve ALLStudents inInclusiveClassrooms

Megan Moore | Mentors: Allie Rhodes, PhD. and Christel Broady PhD.

ASBURY UNIVERSITY
Established 1890

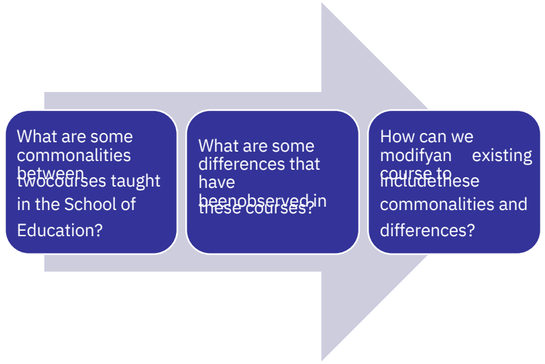
Introduction to Exceptional Learner

In this class we...
•Learn what special education is and the importance of dealing with the learningneeds of students withdisabilities andgifted/talented stu d en ts.
•Developing skills todesign instruction, assess student learning, analyze student progress and achievement, diagnose learning needs, and learn strategies that are evidence based.

Learner Outcomes

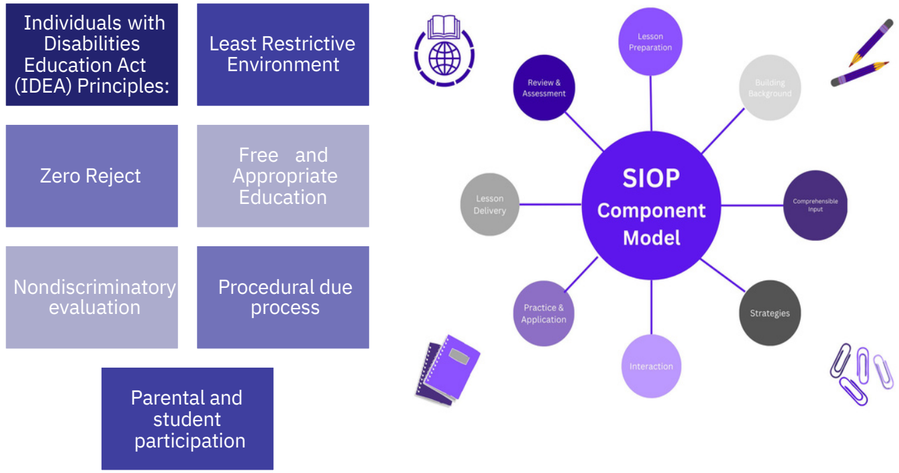
- This class helps students understand those who aregiftedandthosewhohaveemotional,physical, High intellectual, orsensorydisabilities.
- Leverage Practices (HLP's) and Accommodations & Modifications
- Understand what IDEA is and the six principles of IDEA.
- Accommodations Notebook: IDEAdefinition, accommodations/modifications, HLP's, and any other information about each topic.

Inquiry

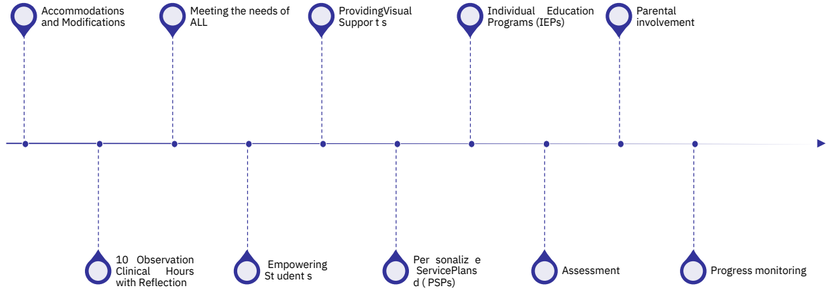


Commonalities

Leadership and Law



Collaboration and Advocacy



Introduction to Facilitating EL Success

In this class we...
•The importance of what an ESL program is and how it benefits students so well.
•Without ESL programs, there would be language struggles and affect how studentslearn in school.
•Sheltered InstructionObservation Protocol (SIOP)
• English Language Development (ELD) Standards Framework(WIDA) are proficiency assessmentsfor grades K-12

Learner Outcomes

- This class is designed to allow you to create resources that you can take with you to your future classrooms to be a more effective teac h er.
- ESL Flowchart: home language survey for placement,LPAC meeting,screener test,parental involvement,and then accommodations.

Conclusion

Because of the common strands of both programs to train coaches, mentors, leaders, and advocates, both professors designed a co-taught commongraduate course for initial and advanced teacher candidates that focuses specifically on

- Coaching
- Mentoring
- Leading
- Advocating
- And administeringprograms making data-based decisions.

This course is offered to Special Education and English as a Second Language graduates and initial students. Not only does the course teach the concepts mentioned above. It goes one step further in that it is co-taught by both professors to model co-teaching in inclusive classrooms to students.

Effect of invasive Amur Honeysuckle on the survival and growth of Chinkapin Oak seedlings

Abigail Garland, Marvin Ruffner
Shaw School of Sciences, Asbury University, Wilmore, KY 40390

ASBURY UNIVERSITY

Introduction

The invasive shrub, Amur Honeysuckle (*Lonicera maackii)*outgrows and outcompetes native flora across the Eastern US, causing the native plants severe decline in quantity and quality 1,2.

Chinkapin Oak trees (*Quercus muehlenbergii*) are a dominant canopy species that grows in limestone-rich soils found in Central Kentucky. Their recruitment is essential to the health and stability of forest biodiversity.

First and second year Chinkapin Oak seedlings are at risk due to shade intolerance 3,4. Other researchers have looked at general tree regeneration 5, however this study focuses on the survival and growth rate of Chinkapin Oak seedlingsin *L. maackii* dominated forests.

Hypothesis: *L. maackii* will negatively affect the growth and survival of first-second year Chinkapin Oak seedlings.

Predictions: If Chinkapin Oaks are shade intolerant, then their growth and survival will be negatively affected by the canopy cover from *L. maackii.*

Methods

Study site: This study was conducted in a young, secondary successional forest along the KY River Palisades corridor on Asbury University property in Jessamine Co., KY. The forest is co-dominated by Chinkapin Oak (*Q. muehlenbergii*), Black Walnut (*Juglans nigra*) , Hackberry (*Celtisoccidentalis*), and Elm (*Ulmus* spp.) with a dense *L. maackii*dominated understor y.

Spring 2019 treatments (x3 replications each)
1 Untreated
2 *L. maackii* removal + 20% glyphosate cut-stump treatment
3 *L. maackii* removal + 20% glyphosate cut-stump + conservation plantings a,b

[a] **Spring 2019 plantings:** 16 Spicebush (*Lindera benzoin*), mid-April –early May; Elymus spp. seeding, 02 Dec 2019.

Table 1-Experimental design of Spring 2019 plots

Data Analysis:
Data was analyzed using a single-factor ANOVA.

Monitoring Chinkapin Regeneration:
•In May, 47 naturally-established Chinkapin Oak seedlings were selected to be observed.
•30 trees were caged for protection from predators.
•Each trees' height and canopy was measured, its physical attributes noted, and given a label on a grid-chart (Figure 1).
•In July, the seedlings were visually observed for survival and new growth.
•In September, each trees' survival was noted and the same measurements (above) re-taken.

Methods cont.

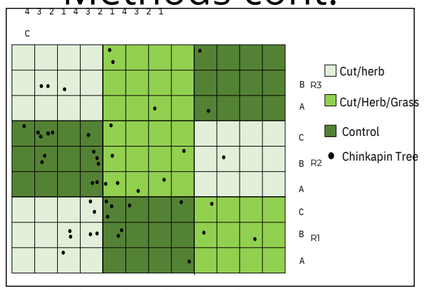


Figure 1-Chart of seedling location

Results

- Seedling mortality frequency was higher in control plots by 2x (30% control VS 15% cut)
- Seedling survival frequency was higher in cut plots by 0%-20% (Figure 2)
- Seedling growth was h.ighest in the cut treatments

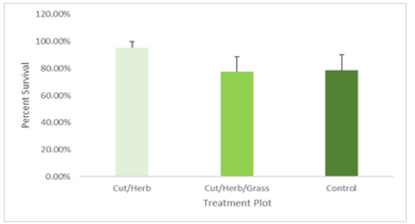


Figure 2-First-year percent survival of Chinkapin Oak seedlings in treatment plots

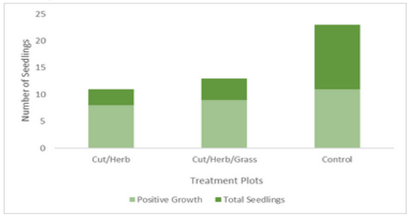


Figure 3-Growth differences between treatment plots

Conclusions

ANOVA analysis suggests that preliminary data of first-year Chinkapin Oak seedling survival is not at risk due to the canopy cover from Amur Honeysuckle *(p*-value: 0.406).

The data gathered over four months advises that the hypothesis be rejected.
However, over years of gathering data, the hypothesis of*L. maackii* negatively affecting the growth and survival of Chinkapin Oaks may be supported.

Looking forward:
•Due to their shade intolerance, Chinkapin Oaks' growth will be hindered by other trees and plants until they become a dominant canopy tree
•Less than 78% of seedlings are likely to survive into adolescent and adult years under *L. maackii*canopy cover
•Chinkapin trees are an irreplaceable component of forest biodiversity, and their recruitment must be protected from invasive species
•Clearing away invasive species is one way to promote Chinkapin Oak survival and growth

Bibliography

1) Collier, M., J. Vankat, M. Hughes. 2002. Diminished Plant Richness and Abundance Below Lonicera maackii, an Invasive Shrub. The American Midland Journalist 147(1): 60-71

2) Meiners, S., S. Pickett, M. Cadenasso.2001. Effects of plant invasions on the species richness of abandoned agricultural land. Ecography 24(6): 633-644

3) Larsen, D., P. Johnson.1998. Linking the ecology of natural oak regeneration to silviculture. Forest Ecology and Management 106(1): 1-7

4) Aldrich, Preston, George Parker, et. al. 2005.
Confirmation of Oak Recruitment Failure in Indiana Old-Growth Forest: 75 Years of Data. Forest Science 51(5): 406-416

5) Meiners, S. 2007. Apparent competition: An impact of exotic shrub invasion on tree regeneration. Biological Invasions 9(7): 849-955

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The Coordination of Picture Books and Multimodal Literacies in Education

Olivia Parsons Dr. Barbara Hamilton

INTRODUCTION

Personal Connection

•As part of my initial inquiry in the Honors program at Asbury University, I participated in an introduction to qualitative methods in conjunction with ED276 course titled Arts & Humanities for Elementary Teachers. This course is required for my major in Elementary Education and allowed me to make applications within a Story Hour lab experience. My endorsement in teaching English as a second language also piqued my interest in exploring multimodal literacies for literacy teaching and learning.

Story Hour Material Development

•For Story Hour, my teaching partner and I chose the book *Leonardo the Terrible Monster* by Mo Willems. The center of our learning focus derived from the storyline which was the attributes of a good friend. Students participated as we acted out the read-aloud story, engaged in discussions about characteristics of a good friend, and created personalized learning opportunities through a guided craft experience.

INQUIRY

I set about to explore the intersections between multimodal literacies and picture books within the context of the Story Hour lab experience. My initial inquiry involved qualitative methods with a collection of field notes and reflective analysis of pictures and video.

SUPPORTING RESEARCH

Multimodal Literacies

●"Young children practice multimodal literacies naturally and spontaneously. They easily combine and move between drama, art, text, music, speech, sound, physical movement, animation/gaming, etc." (NCTE, 2005)

Multimodal Literacies for Teaching and Learning

●"Although schools all too frequently emphasize and send the message to children that the written text is primarily importance in reading, picture books intricately weave the meaning into both the art and the written language." (Martens et al., 2012)

Students listen as Olivia Parsons reads *Leonardo the Terrible Monster* to them by Mo Willems during Story Hour.

Students engage with Olivia as she reads *There's a Monster in Your Book* by Tom Fletcher.

OBSERVATIONS

●Reading Images

○Through observations I noticed that students were reacting to the plot of the book before I had read it out loud. The students would look around to their peers to engage in reactions with them after seeming to understand what happened in the story before it was audibly read.

○The reactions of these students were surprising to me as they were not of a reading age. Students seemed to understand images as a multimodal literacy because the message of the book was understood. The images were engaging to students before they heard the words of the story.

●Reading Gestures

○When I reflected on the younger children's interactions with their parents, I noticed that the gestures of their parents also provided them engagement in the story. This demonstrated to me that they understood parts of the story without the requirement of language fluency.

○As seen in the picture on the left, the children seemed to understand body language through a mother reacting to the book for her child to understand. This child was too young to grasp word comprehension, but responded to the mother's reaction to the book.

○I was surprised to see how much gesture played a role in Story Hour. Through the multimodal literacy of gestures there seemed to be an innate understanding as most parents express to their infants how they are feeling through gestural motions.

IMPLICATIONS FOR THE FUTURE

Reflections

•Multimodal literacies were abundantly present throughout the Story Hour.
•Students practiced multimodal literacies through gesture, movement, expression, performance, and play.
•These multimodal literacies provided pathways for student engagement.

Applications

Beginning to understand the impact of multimodal literacies allows teachers to grasp the importance of them for teaching and learning.

●Using picture books as part of my future classroom content is a great way to access students' multimodal literacies.

●Another simple way for further implementation in my classroom will be through multimedia and multimodal text types. This is a way of building student understanding through a presentation with words, audio, and visual stimuli. There are large amounts of videos that cover picture book content and help to further students' understanding of what they are learning through them.

●Using picture books can also be beneficial for brain breaks in my future classroom. Young children frequently need brain breaks in the midst of complex content learning. Using picture books enables all children to come back to multimodal literacy practices and build self-efficacy for learning.

Martens, P., Martens, R., Doyle, M.H., Loomis, J., Aghalarov, S. (2012). Learning from picturebooks: Reading and writing in first grade. *The Reading Teacher. Vol. 66 Issue 4 pp. 285–294 DOI:10.1002/TRTR.01099*
National Council of Teachers of English (2005). *Multimodal Literacies.* [Position statement]. https://ncte.org/statement/multimodalliteracies/

eDNA detection of darters (Percidae: Etheostomatinae) in central Kentucky streams

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ASBURY UNIVERSITY

Introduction

Environmental DNA (eDNA) has rapidly become a firmly established method for detecting organisms of research and conservation interest and promises to greatly increase the ease, efficacy, and scope of ecological studies. Recent works have highlighted the need for carefully tested assays for use in species specific marker studies and thorough vetting of eDNA primers using as many local sequences as available.

In this study, four darter species were chosen for assay development and testing*: E. flabellare*(Fantail darter), *E. caeruleum*(Rainbow darter*), E. blennioides*(Greenside darter), *and P. caprodes*(Logperch). The developed assays were tested in silico with Mega X and ClustalW as well as in vitro with endpoint PCR before environmental water sample testing.

Table 1. Quantitative PCR assays developed for the four darter species.

Target species	Amplicon length (BP)	TM	Oligo	Sequence (5'- 3')
E. flabellare	**118**	**62**	**F**	**AAGCGAAGAAGCGAGTTAGG**
(fantail)		**62**	**R**	**GGTGCTACGGTCATCACTAATC**
		68	**P**	**CCCACATAAGGCACTGCAGAGAGT**
E. blennioides	135	64	F	TCTCCGCTCCATCCCAAATAAG
(greenside)		65	R	AATAGGAACTGTGAGAGAGGGCG
		68	P	CCTTGCTGGCCTCAATCTTGGTACT
E. caeruleum	**105**	**62**	**F**	**GAGTGAGGGTTGCGTTATCTAC**
(rainbow)		**62**	**R**	**GAGCCACAGTCATTACCAATCT**
		68	**P**	**AGAAGCCGCCTCAAATCCACTGAA**
P. caprodes	139	62	F	CTCCATCAGACAGGCTCAAATA
(logperch)		62	R	CGAATAGAGCGAGGGATGTTAG
		68	P	TAGGCTTCGCCGTTCTCCTTATTGC

Although none of the fish in this study are threatened or endangered Kentucky is home to five species of federally threatened or endangered fish, including three darter species. The results of this study should prove useful in the eDNA monitoring of these and other threatened and endangered fish species.

Figure 1. A male *Etheostomacaeruleum*(Rainbow darter) photo courtesy jforbes3, iNaturalist.

Methods

Tissue Collection of Target and Non-target Species
Tissue was collected from all target species from both the Cumberland and Kentucky River drainages. Additionally, tissue was collected from nontarget, sympatric species from both Cumberland and Kentucky drainages. Tissue DNA was extracted from each darter species using a DNeasyblood and tissue kit (Qiagen) according to the provided protocol.

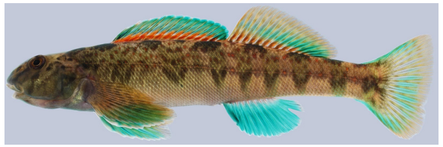

Figure 2. *E. blennioides*, (greenside darter) photo courtesy of North American Native Fishes Association.

Sequencing of Target Species
Portions of cytb were amplified from target species using published primers. Sequencing was completed by ACGT (ACTG inc) and conducted in duplicate.

Assay Development and Testing
Partial cytb sequences were aligned with 10 potential sympatric Kentucky darter species using MegaXand Clustal W. F and R primer pairs were developed using PrimerQuest software (IDT) and aligned with sympatric or potentially sympatric species to verify specificity. All primers have at least three mismatches in the F or R primer. Tissue DNA from both Kentucky River and Cumberland River drainages were used.

Field Testing
Three different water samples were collected from Buck Creek. One liter of each sample was filtered and extracted. The developed primers were used to detect the presence of target DNA in the environmental sample.

Figure 3. *E. flabellare* (Fantail darter) photo courtesy of Emilio Concari, *Maryland Biodiversity.*

Results

Sequencing
Tissue-extracted DNA was used to create the bands for sequencing reactions. The amplicons were sequenced by ACGT (ACGT Inc). Target and non-target cytb sequences were acquired for in silico analysis.

In Silico Testing

The developed assays were aligned with 10 potential sympatric Kentucky darter species using MegaXand ClustalW.

Table 2. Mismatches between *P. caprodes*oligos and 10 sympatric species. KY = Kentucky River drainage, CM = Cumberland drainage, UN = Unknown.

Sympatric species	Drainage	FP	RP	P	% sim.	Seq. acc. #
Percina caprodes	KY	0	0	0	-	KT880217.1
Etheostoma flabellare	KY	4	7	3	82.	KT880219.1
Etheostoma blennioides	KY	3	6	4	3	KT880218.1
Etheostoma caeruleum	KY	6	6	4	81.	KT880220.1
Etheostoma stigmaeum	CR	7	6	5	2	BC
Etheostoma camurum	CR	3	6	4	81.	BC
Etheostomasanguifluum	CR	3	6	5	8	BC
Etheostoma variatum	KY	5	7	4		AF289266.1
Etheostoma cinereum	C	4	5	4	80.	AY560356.1
Etheostoma spectabile	M	4	5	4	1	AF045344.1
Etheostoma blennioides	UN	3	7	3	83. 2	BC
	CR				82. 1	
					82. 9	
					83.	
					81. 4	

In vitro testing
F and R primers were first evaluated via a temperature gradient approach to determine optimal annealing temperature. The optimal annealing temperature for each was then used for the specificity reactions.

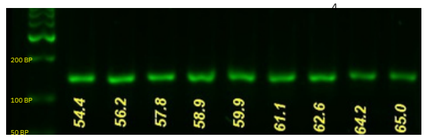

Figure 4. *P. caprodes* gradient reactions.

Specificity tests for each of the primers showed binding only with the target DNA. At optimal annealing temperature, the primers did not bind to the non-target sympatric species (Figure 5).

Results

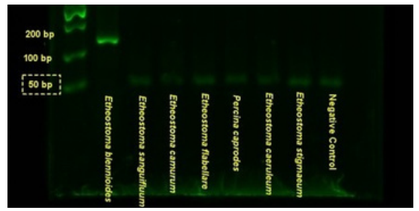

Figure 5. Specificity reactions for *E. blennioides*

Field Testing
Two of the three field collected samples have been processed at this time. *E. caeruleum*DNA was detected in both of the Buck Creek(Pulaski County) environmental samples. *P. caprodes*and *E. flabellare*DNA were each detected in one Buck Creek environmental sample while *E. blennioides*DNA was not detected in any sample.

Conclusions

in silico

•All darter assays exhibit significant mismatches with sympatric, but not target, species in testing.

•All darter assays detect target species, but not sympatric species, in *in vitro* testing.

•Initial field testing indicates successful detection of darters in a manner consistent with field observations with the exception of*E. blennoioides*.

•Initial sequence analysis appears to indicate lack of detection of *E. blennoioides*in Buck Creek (Cumberland River) samples is the result of single nucleotide polymorphisms (SNP's) in Cytbin Cumberland versus KY River drainage (for which assays were created) specimens.

Bibliography

Ficetola, G. F., Miaud, C., Pompanon, F., & Taberlet, P. (2008). Species detection using environmental DNA from water samples. *Biology Letters, 4*(4), 423-425.

Guivas, Ramon, Brammell, B. "Use of Environmental DNA to Determine Fantail Darter (Etheostomaflabellare) Density in a Laboratory Setting: Effects of Biomass and Filtration Method" International journal of zoology 2020, (2020): -. doi: 10.1155/2020/4731686

Piller, K. R., & Bart Jr, H. L. (2009). Incomplete sampling, outgroups, and phylogenetic inaccuracy: A case study of the Greenside Darter complex (Percidae: *Etheostomablennioides*). *Molecular phylogenetics and evolution, 51*(2-3), 344.

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When *Yellow Wallpaper* Became "Yellow Walls:" The Confluency of Hysteria and Shell Shock

ASBURY UNIVERSITY
Established 1890

Hailey Small Erin Penner

Hailey Small Erin Penner

Beaded necklace created by Private Walter John Cressey, who lost his sight and four fingers in a gas attack, as he recovered at Queen Alexandra Military Hospital, London.

FAILED SHELL SHOCK TREATMENT

Shell Shock, Defined

- Term first used six months after World War One began.
- Typically diagnosed as PTSD today. Symptoms include tremors, stutters, paranoia, and nightmares.
- Common among World War One veterans.

Treatment in Mainstream Medicine

- Shell shock symptoms were not included in World War One injury classifications.
- Treatments were almost entirely ineffective.

According to a 1918 document, a soldier with shell shock was "cured in 20 minutes" and deemed "fit to return to civil employment." This is not consistent with contemporary mental health understanding.

FAILED HYSTERIA TREATMENT

Hysteria, Defined

- Hippocrates (460-375 BC) derived "hysteria" from Greek word for "uterus" to describe "uncontrollable emotions."
- Hysteria was a vague diagnosis for symptoms including anxiety, paranoia, tremors, and paralysis among women.

Treatment in Mainstream Medicine

- Rest cures were popular but ineffective, and demanded the removal of social, creative, and intellectual stimulation.
- Many women with hysteria were kept isolated and idle indefinitely.

Hippocrates "asserts that… the uterus is prone to get sick, especially if it is deprived of the benefits arising from sex and procreation…"
-US National Library of Medicine

Embroidery made using a standard regimental badge pattern kit. Kits were often provided by the Red Cross and were helpful for teaching beginners.

The Yellow Wallpaper (1892)

As Fictional Short Story

- Narrator with postpartum depression is prescribed a rest cure. Demonstrates the failure of mainstream medicine to treat mental illness.

As Autobiography

- Written by Charlotte Perkins Stetson, who was also prescribed a rest cure for postpartum depression.
- Stetson found that creative stimulation was healing, despite popular advice.

Broader Trends Among Women

- As doctors continued to fail, women learned to treat their own mental illnesses.
- Through self-treatment, women learned strategies that would later effectively treat shell shock.

Bradford Handicrafts Club

What it Was

- Experienced women artists taught shell shock patients to create handicrafts, especially embroidery.
- Groups throughout Europe provided similar treatment.

How it Worked

- Creating handicrafts healed tremors, fulfilled financial needs, provided purpose, and forged communities.
- Bradford provided early forms of occupational and art therapies, which were much more effective than traditional mental health treatment.

"They came to the club… hardly able to walk; they were put to work, netting, or weaving, or stitching, and the charm fell upon them."
- *The Yorkshire Observer*

Experience Created "Yellow Walls"

Detail-Oriented Treatment

- Workroom was "large, well-ventilated, open to light… [with] blue curtains against the yellow walls."
- Stetson discussed similar design elements in *The Yellow Wallpaper.*

Prophetic for Contemporary Research

- The club's interior design perfectly aligns with 21stcentury research, even eighty years before the research existed.
- The term "art therapy" was coined two decades women first used handicrafts to heal psychological illness and is still used to treat veterans with PTSD.

The Bradford Altar Cloth (right, details above) was designed by Bradford Handicraft Club founder and world-renowned artist Louisa Pesel, cross-stitched by club patients, and used at Abram Peel Hospital.

The altar cloth at London's Saint Paul's Cathedral (above, details left) was embroidered by 138 men from various countries. The cloth is stored with a hand-illuminated book containing the names of the men who embroidered, but the women who designed the cloth are unknown.

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annual symposium

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DUE Tuesday, March 19

by 5 p.m.

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- Paper PDF **due Tuesday, March 19 by 5 p.m.** with an abstract for your poster/paper (summary of what it covers)

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- SEARCH Symposium is April 8 & 9, 2024

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- Faculty sponsor
- Must also submit a poster (on same topic)
- Only 1 person as author

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- Typed; double-spaced
- Clear font, no smaller than Times New Roman, 12 pt.
- Each student is limited to 1 paper

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Proper Citations

Creativity

Organized

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Importance

Balance - not bias

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