Proposal for Summer Research Fellowship (SRF22)
Jennifer Burns
Second Year Doctoral Student (KIN)
Mentor: Dr. Mei-Hua Lee, Kinesiology
Word Count: 694/700

Background: In the United States, 1 in 6 children are diagnosed with a developmental delay, which impacts a child's participation in activities of daily living.[1,2,3] One developmental area is fine motor skills, which are tasks involving manipulation and precision in our fingers, hands, and wrists. Many school-based activities require the use of fine motor skills, including handwriting, cutting, using a computer, playing with blocks, opening lunch containers, and zipping a backpack or jacket.[2,3,4]

Students spend between 37.1% to 60.2% of their school day performing tasks requiring fine motor skills.[4] Recently, there has been an increased number of students exhibiting decreased fine motor skills, which heavily impacts a child's school performance and has led to an increased number of evaluations for school-based occupational therapy.[3,4] Occupational therapists work within the school setting to support children eligible for special education under the Individuals with Disabilities Education Act (IDEA) on engagement and success of academic and nonacademic activities, specifically those involving fine motor skills.[2,4] Children qualify for occupational therapy services following an evaluation, typically consisting of a qualitative observation and quantitative assessment.

However, both qualitative and quantitative components of occupational therapy evaluations have limitations.[5] Currently, qualitative observations are non-standardized and are therefore unable to track student progress systematically and longitudinally. Meanwhile, current quantitative assessments are pencil-and-paper tasks which are not interactive and do not reflect current classroom requirements, which recent reports indicate exhibits a decreased time spent on paper-and-pencil tasks and an increased time spent on manipulative tasks.[4]

One potential solution to track behavior longitudinally and quantitatively is to use a smart toy. Our lab has been using smart toys to understand exploratory behaviors in preschoolers but has yet to use them with school-aged children. Smart toys are sensor-augmented toys that can capture manual behavior (rotation, fingering, and throwing) when interacted with and manipulated by an individual, and can measure a child's fine motor development allowing for the early detection of fine motor skill delays.[6,7,8,9] However, smart toys have yet to be explored or utilized for occupational therapy in the school-based setting.

The quantitative and qualitative data from these toys could allow school-based occupational therapists to track a child's progress overtime without being time consuming. Therefore, the aim of our study is to adapt our smart toy for use with school-aged children to evaluate their fine motor control and manipulation, while collecting both quantitative (kinematic) data and qualitative (observational) data, comparing differences in performance to the Bruininks-Oseretsky Test of Motor Proficiency, Second Edition (BOT-2).

Study Design: Twenty 6- to 9-year-old children will participate in pilot data collection. Participants will be evenly divided into two groups, fine motor delay and no fine motor delay. After providing written, informed consent, participants will interact with the smart toys,

providing both kinematic and qualitative data. Each participant will also complete the fine motor control portion of the BOT-2, a standardized test currently used within occupational therapy.

Following data collection, the smart toy data will be analyzed using two methods; qualitative video data will be behaviorally coded using "Datavyu" to characterize movement patterns, and quantitative kinematic data recorded from the sensors within the toys will be processed. The BOT-2 assessment will be scored and then compared to the results from the quantitative smart toy data to compare similarities and differences in performance between the two tasks.

Timeline and Deliverables: This fellowship will provide the resources necessary to achieve the proposed aim based on the timeline in Table 1. After completing this research, I will submit a manuscript for publication in *American Journal of Occupational Therapy* and an abstract for presentation at the North American Society for the Psychology of Sport and Physical Activity.

This fellowship will allow me to utilize a smart toy to evaluate fine motor abilities in children and establish reliability and validity of the toy. Executing this pilot study is essential for checking the feasibility and practicality of my dissertation project, which will expand the age-range for the use of the smart toy, allow for creating normative data to establish the toy as a reputable evaluative measure, and focus on evaluating children with fine motor delays, with the goal of ensuring children can receive a timely diagnosis and proper intervention.

Appendices: *Table 1, References, College Transcript*

Table 1. Summer Research Fellowship Study Timeline

	April 2022	May 2022	June 2022	July 2022	August 2022
Adapt Smart Toy	X	X			
Smart Toy Data Collection		X	X	X	
BOT-2 Data Collection		X	X	X	
Quantitative Data Analysis			X	X	X
Qualitative Data Analysis			X	X	X
Manuscript Preparation: *AJOT*				X	X
Abstract Preparation: NASPSPA				X	X

During the two summer months (June-July 2022), funding from the SRF will provide me with the time and resources to complete data collection, analyze quantitative and qualitative data, and begin manuscript and abstract preparations for submission in Fall 2022.

References:

1. Zablotsky B, Black LI, Maenner MJ, Schieve LA, Danielson ML, Bitsko RH, Blumberg SJ, Kogan MD, Boyle CA. Prevalence and trends of developmental disabilities among children in the United States: 2009–2017. Pediatrics. 2019 Oct 1;144(4).
2. American Occupational Therapy Association. (2016). Occupational therapy in school settings. Retrieved from https://www.aota.org/About-Occupational-Therapy/Professionals/CY/school-settings.aspx
3. Grissmer D, Grimm KJ, Aiyer SM, Murrah WM, Steele JS. Fine motor skills and early comprehension of the world: two new school readiness indicators. Developmental psychology. 2010 Sep;46(5):1008.
4. Caramia S, Gill A, Ohl A, Schelly D. Fine motor activities in elementary school children: A replication study. American Journal of Occupational Therapy. 2020 Mar 1;74(2):7402345010p1-7.
5. Brons A, de Schipper A, Mironcika S, Toussaint H, Schouten B, Bakkes S, Kröse B. Assessing Children's Fine Motor Skills With Sensor-Augmented Toys: Machine Learning Approach. Journal of Medical Internet Research. 2021 Apr 22;23(4):e24237.
6. Mironcika S, de Schipper A, Brons A, Toussaint H, Kröse B, Schouten B. Smart toys design opportunities for measuring children's fine motor skills development. InProceedings of the Twelfth International Conference on Tangible, Embedded, and Embodied Interaction 2018 Mar 18 (pp. 349-356).
7. Rivera D, García A, Alarcos B, Velasco JR, Ortega JE, Martínez-Yelmo I. Smart toys designed for detecting developmental delays. Sensors. 2016 Nov;16(11):1953.
8. Westeyn TL, Abowd GD, Starner TE, Johnson JM, Presti PW, Weaver KA. Monitoring children's developmental progress using augmented toys and activity recognition. Personal and Ubiquitous Computing. 2012 Feb 1;16(2):169-91.
9. Van Delden R, Aarts P, Van Dijk B. Design of tangible games for children undergoing occupational and physical therapy. International Conference on Entertainment Computing 2012 Sep 26 (pp. 221-234). Springer, Berlin, Heidelberg.

Name: Annie Gensterblum
Year: 2nd
Advisor: Rebecca Jacobsen
Word Count: 700

Introduction
In the early 2000's, No Child Left Behind (NCLB) ushered in a new era of measuring teacher effectiveness. Over the next two decades, state and national policies accelerated this focus on teachers as the main mechanism for improving student outcomes (Mitra, 2018). While research has focused on whether and how teacher accountability policies improve teaching and learning, less attention has been paid to the ways that these policies shape teacher self-perception, satisfaction with being a teacher, and their emotional response to their students.

Context
In Tennessee, many of the districts use the Tennessee Educator Acceleration Model (TEAM) and related rubrics. The evaluation process is made up of three parts, student achievement, teacher observations, and a professionalism measure (Harrell, 2018). My research will focus on Tennessee teachers' emotional sensemaking processes to understand how emotional factors shape teachers' understanding of policy, themselves, and their role as a teacher.

Framework
Berkovich & Eyal (2018) found that emotional support given by principals has a positive effect on teachers and the evaluation process. High-stakes observations could influence teacher emotions creating anxiety and possibly poor performance during these observations. Bogart (2013) highlights this by stating if teachers have negative feelings about the evaluation process it will change their behavior and how they engage with that process. Reid (2020) further discusses the importance of principals building trust with teachers and positive perceptions about observations if teachers are to feel successful in the year-long evaluation process. Building trust with teachers can influence teachers' emotions in a positive direction when conducting observations and giving feedback.

Interviewing teachers about emotions they experienced before, during, and after the review and the impact of those emotions on their self-conception as a teacher and their work may illuminate the ways principals and other administrators can effectively use rubrics, feedback, and build trust to support growth within classrooms and alleviate negative emotions that may accompany the process of teacher observations. Literature around teacher evaluation methods is mostly quantitative and qualitative literature focuses on teacher perceptions rather than emotions. Thus, my proposed SRF would expand research in new and innovative ways. In addition to theoretical contributions, this research can contribute directly to practice by attuning principals to the possible emotional impact that the evaluation experience may have on their school climate, ability to retain teachers, and their ability to foster productive feedback.

Methods
This research will use semi-structured interviews to collect data. The research questions are intended to understand teachers' emotional sensemaking about teacher accountability policies,

specifically the observation component. To understand teachers' feelings, emotions, and emotional sensemaking processes I ask the following research questions:

1. How do teachers use and make emotional sense of the rubrics for effectiveness provided to them?
    a. How did teachers feel before, during, and after the observation about their competence as a teacher, their love for teaching, and their self-concept as a teacher?
    b. How did these emotional responses shape how they acted upon the feedback received during the observation?

After IRB approval, I will interview teachers in Nashville, Tennessee as they are a large, diverse district that uses the TEAM evaluation process. Interviews will last approximately an hour. In order to analyze the data, the interviews will first be transcribed and de-identified using a transcription program, and then will be coded and analyzed using Dedoose to look for patterns between and across teachers; including the relationship between actual feedback and emotional response, years of experience and emotional response, self-conception of effectiveness and love for teaching and actions that are taken to respond to the feedback received.

Deliverables
This proposal builds upon a literature review and interview protocol developed during a course. I plan to further refine my instrument and develop a sampling plan to ensure I speak with a wide range of teachers. I plan to complete interviews during May and June so that I can develop an AERA proposal to be submitted by July 2022

This proposal will have preliminary findings on teachers' emotional sensemaking processes around classroom observations. Additionally, I plan on submitting another proposal to the Association of Education Policy and Finance (AEFP) next November in hopes that they will give me the opportunity to revise the paper and submit for a peer-reviewed journal.

Appendix A: Interview Questions

1. Can you describe your teaching experience? (how long, where, which grades/subjects etc…)
2. What kinds of feelings do you have when you're being observed by an administrator?
3. Have you always had a rubric or something similar to guide your instruction?
4. Do you enjoy using rubric, or something similar, to help you in your classroom?
5. Can you explain to me what kinds of training you've had on the TEAM evaluation rubric?
   a. Would you recommend it to another teacher?
   b. Who led the training? (School, district, state?)
6. How do you "feel" about the rubric when being observed?
   a. Does the rubric help to alleviate anxious emotions when an administrator is in your classroom?
7. Do you think that the different administrators inside or outside of your building use or interpret the rubric differently within your building?
   a. How does this affect the ways you prepare for observations?
8. What kinds of words, phrases, or other elements of the rubric stick out to you?
9. If you could change something about the rubric, what would it be?
10. Do you think the rubrics you use in your classroom are similar to ones used as an evaluation tool for your instruction and growth?
11. In what ways do you feel the rubric is aligned with your own goals for instruction?
    a. which parts/indicators/action words do you feel are aligned?
    b. which parts/indicators/action word are not aligned?
12. In what ways are the rubric and subsequent feedback relevant to you in your work?

Appendix B: Research Timeline

May	June	July
Actions • IRB Approval • Contact Teachers • Schedule Interviews	Actions • Conduct interviews • Transcribe interviews • Code interviews using themes pulled from interview responses	Actions • Analyze interviews • Write AERA proposal with preliminary findings

References

Bogart, C. D. (2013). Teacher evaluation and classroom practice: Teacher perceptions in Northeast Tennessee (Doctoral dissertation). Retrieved from Electronic Theses and Dissertations. (Paper 1777).

Bryant, C. B. (2013). *Perceptions of Tennessee school principals about the Tennessee Educator Acceleration Model (TEAM)* (Doctoral dissertation, East Tennessee State University).

Harrell, K. (2018). Teacher Perceptions of the Tennessee Educator Acceleration Model (TEAM).

Mitra, D. (2017). *Educational change and the political process.* In. New York: Routledge.

Reid, D. (2020). Teachers' perceptions of how principals use new teacher evaluation systems. *Teachers and Teaching 26*(1), 129-144

Vance, J. W. (2016). *Elementary principal perceptions of the Tennessee educator acceleration model* (Doctoral dissertation, East Tennessee State University).

Laxmi Prasad Ojha

Year: 2nd

Faculty Mentor: Dr. Peter De Costa

Word Count: 698

Understanding the Language and Literacy Practices of Transnational Youths

The Project

With the ever-increasing growth of students with immigrant and refugee backgrounds in the US classrooms, educators are facing new challenges every day regarding how to serve the educational needs of their students. However, these transnational students face complexities due to the transition they have to make in various aspects of their lives (Skerrett, 2015). Since transnational youths coming from different parts of the world "bring rich transnational funds of knowledge" (Compton-Lilly et al., 2019, p.3) to the US classrooms, the literacy practices of these youths have the potential to benefit both students from immigrant backgrounds and their classmates. This can also support enhancing the global worldview of the students (De Costa, 2014; Hawkins, 2014).

Schools in the US have a long history of the erasure of languages, cultures, and literacies of immigrant students (Enciso, 2011) and inherent linguistic racism (Baker-Bell, 2020; De Costa, 2020). The transnational students' language practices are portrayed from a deficit perspective which impacts the students' self-image, language practices, and have further implications for their learning (Allard et al., 2014). The diverse ways of being, knowing and literacies of these students are marginalized through various educational policies and programs such as national and state learning standards, high-stakes tests, and curricula (Ghiso & Low, 2012) as these policies portray the ideologies that benefit the students from monolingual English-speaking families (Hinton, 2016).

For the SRF 2022, I propose to conduct a study with four transnational youths from two immigrant families living in the US to understand their language practices as they navigate through the schools and society in the US. Using a community-engaged approach (Haddix, 2015; Hadley et al., 2019), my goal is to develop a partnership with these transnational youths and engage in various activities such as reading books covering the transnational people and issues, book discussions, writing autobiographical reflections, and doing multimodal literacy practices

such as drawing pictures and maps. Drawing on earlier research on transnationalism, language, and literacy practices (Canagarajah, 2019; Kwon & Sun, 2021; Skerrertt, 2015), I will focus on understanding how engaging in discussion of the issues of transnationalism, multilingualism and multiculturalism affects the ways these youths view themselves in relation to the US English dominant schools and society. My goal is to understand the ways transnational mobility affects these youths' language, and identity and document their literacy practices. Data collected through various sources such as interviews, field notes, literacy artifacts, oral and written reflections while discussing books will be analyzed using pattern coding (Miles et al., 2014). More specifically, I will try to find answers to the following research questions:

1. How do transnational multilingual children and youths navigate their everyday lives in relation to their language and literacy practices?
2. In what ways have these practices influenced their academic success and personal identities?

Rationale

The project can offer valuable insights into transnational students' language and literacy practices. Understanding the students' perspectives can be useful for educators as they have the ability to shape and transform students' academic success, identities, and sense of belonging both in the classroom and community (Skerrett, 2012). The study will provide insight for educators to support transnational youths with ideas, tools, and resources to navigate the complexities of the multiple contexts they encounter on an everyday basis.

Preparation and Skills

I have been working with immigrant families and youths for a few years now as I wrote my MA thesis on family language policy and bilingual development of children from immigrant families. This has allowed me to develop content, methodological and ethical understanding of the issues related to immigrants and the refugee population.

I have been interacting with my participants and their families for a few months and have developed a good rapport with them. I want to build on this relationship and form a partnership and work with them next summer. I have also obtained verbal consent from the parents in both the families to conduct this project with their children.

Deliverables

  Based on this project I aim to submit papers for presentation at the *International Literacy Association* and *AERA Conference*. I also plan to submit a manuscript to the *Journal of Literacy Research*.

References

Allard, E., Mortimer, K., Gallo, S., Link, H., & Wortham, S. (2014). Immigrant Spanish as liability or asset? Generational diversity in language ideologies at school. *Journal of Language, Identity & Education*, *13*(5), 335-353.

Baker-Bell, A. (2020). *Linguistic justice: Black language, literacy, identity, and pedagogy*. Routledge.

Canagarajah, S. (2019). *Transnational literacy autobiographies as translingual writing*. Routledge.

Compton-Lilly, C., Kim, J., Quast, E., Tran, S., & Shedrow, S. (2019). The emergence of transnational awareness among children in immigrant families. *Journal of Early Childhood Literacy*, *19*(1), 3-33.

De Costa P (2014) Reconceptualizing cosmopolitanism in language and literacy education: Insights from a Singapore school. *Research in the Teaching of English 49*(1), 9-30.

De Costa, P. I. (2020). Linguistic racism: its negative effects and why we need to contest it. I*nternational Journal of Bilingual Education and Bilingualism*, *23*(7), 833-837.

Enciso, P. (2011). Storytelling in critical literacy pedagogy: Removing the walls between immigrant and non-immigrant youth. *English Teaching: Practice and Critique*, *10*(1), 21-40.

Ghiso, M. P., & Low, D. E. (2013). Students using multimodal literacies to surface micronarratives of   United States immigration. *Literacy*, *47*(1), 26-34.

Haddix, M. (2015). Preparing community-engaged teachers. *Theory Into Practice*, *54*(1), 63-70.

Hadley, H. L., Burke, K. J., & Wright, W. T. (2019). Opening spaces of restoration for youth through community-engaged critical literacy practices. *English Teaching: Practice & Critique, 19*(1), 95-106.

Hawkins, M. R. (2014). Ontologies of place, creative meaning making and critical cosmopolitan education. *Curriculum Inquiry, 44*(1), 90-112.

Hinton, K. A. (2016). Call it what it is: Monolingual education in US schools. *Critical Inquiry in Language Studies*, *13*(1), 20-45.

Kwon, J., & Sun, W. (2021). Transnational Lives of Asian Immigrant Children in Multicultural Picture Books. *YC Young Children*, *76*(3), 24-31.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative data analysis: A methods sourcebook (3rd ed.). Sage

Skerrett, A. (2012). Languages and literacies in translocation: Experiences and perspectives of a transnational youth. *Journal of Literacy Research*, *44*(4), 364-395.

Skerrett, A. (2015). *Teaching transnational youth—Literacy and education in a changing world*. Teachers College Press.

Appendix A (Participants)

Family	Participant (Pseudonym)	Age/Gender/Language	Educational Level	Background
Family 1 - Single mother from Nepal with two children)	Beena	19/Female Fluent in English and Nepali	Undergraduate student	Born in Nepal. Completed upto grade 8 in Nepal. Attended high school in the US.
	Binod	12/Male Fluent in English and Nepali	Grade 6	Born in Nepal and came to the US at the age of 5. Attended preschool and kindergarten in Nepal and Grade1-6 in the US
Family 2 - Parents born in Bhutan - Displaced from Bhutan and lived in refugee camp in Nepal for 15 years - Resettled in the US	Kamal	16/Male Fluent in English and Nepali	Grade 11	Born in a refugee camp in Nepal
	Hari	12/Male Fluent in English and Nepali	Grade 5	Born and raised in the US

Appendix B (Project Timeline)

Activities/Data collection	Timeline
IRB approval and preparation	Spring 2022
Identification and purchase of books (6-8 books in total)	First week
Reading books and discussing the themes	Every week for about 2 months
Written reflection	Several times based on the need
Drawing pictures and maps of people, places and culture	Several times based on the discussion. Ideally after
Interview with the participants	Final two weeks of the project
Field notes	For the entire period (2 months) as needed