



NTID Student Research Fair 2024

**Rosica Hall
April 12, 2024
10am-12pm**



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Abstracts

1st Floor-Rosica Hall

1 ***The use of sign language musicality in Visual Vernacular storytelling***

Student: Zahria Ruper
Advisor: Jill Bradbury

Visual vernacular is a form of visual Deaf art that is used to express one's thoughts. It breaks from traditional grammar and prioritizes visual aspects such as mime, cinematographic techniques, iconic signs, gestures, and facial expressions. It is an art form that breaks language barriers, creating a space for people to come together and express their thoughts without the use of a shared language. Another form of visual Deaf art is sign language musicality. Sign Language musicality is an expressive form of art that uses visual equivalents to sound-based musical elements such as rhythm and melody. It allows Deaf artists to express themselves artistically without the use of sound, using purposeful body, face, and hand movements. Genres of sign language music include purely visual music, original work by Deaf artists that incorporates sound and visual elements, and sign language translations of sound-based music. While researchers have identified different VV techniques, the role of sign language musicality in VV has not been studied. My research project focuses on the question of what role musicality plays in VV storytelling. To answer my research question, I will analyze five VV stories. I will be analyzing if musical elements such as rhythm and melody are present and how they are used.

2 ***Evaluating Deaf adults' neurocognitive skills in ASL and English***

Student: Chehally Soto
Advisors: Peter Hauser & Jessica Contreras

The clinical neuropsychological evaluation of deaf ASL signers typically does not include testing of the individual, ASL skills or their ability to remember items in ASL. The team is developing bilingual ASL-English neuropsychological assessment tools that ultimately will be used with older deaf adults to rule out symptoms of dementia. Currently, we are testing the psychometric properties of the tests with deaf college students. The study protocol includes five ASL tests, three English tests, and eight cognitive tests that are administered in one session for 3 hours with breaks. So far, 12 students participated in the study but one needed to be excluded from analyses because of video recording issues. The poster will describe the study, background, tests, methods, and demographics of participants tested to date. Discussion on recruitment and testing challenges will be included. The project aims to test over 100 deaf adults and results from the RIT/NTID students might help us also evaluate the use of these tools for assessing attention and learning disorders.

3 ***Sign Language integration in Dental Education***

Student: Grace Phelan
Advisor: Liz Ayers

There exist many communication barriers for deaf and hard of hearing (DHH) patients when receiving dental care. Providers can address this inequity and offer better care by using sign language. However, there are few instances of sign language or deaf culture courses in dental school curriculums. Only one unique curriculum at the University of the West Indies (UWI) dental school, Mona Jamaica, includes mandatory courses in sign language and deaf culture as well as clinical application of sign language. This study is intended to investigate this curriculum and determine the effectiveness of sign language training for dental students, and the longevity of its impacts. This study was performed through a semi structured interview with a professor who developed this course at UWI, and questionnaires for students who have graduated from this program. The students' application of sign language after graduation conveys evidence of an effective curriculum. At the same time, their experiences highlight ways to improve upon this program such as continual education for practicing dentists. By learning more about the structure and implementation of this curriculum, other dental schools may also develop similar sign language curriculums.

4 ***Perception of equitable RIT course selection & access services***

Student: Joel Sibert
Advisors: Rain Bosworth & Jess Cuculick

d/Deaf and HH college students face unique challenges in navigating academic and social environments, yet their experiences with access services still need to be represented in research. This study hopes to address this gap by exploring students' experiences, needs, and perceptions of d/Deaf and Hard-of-Hearing students at the Rochester Institute of Technology/National Technical Institute for the Deaf. Utilizing a mixed-methods approach, data will be collected through a quantitative survey administered via Qualtrics and supplemented with qualitative methods such as open-ended survey questions, with the possibility of a focus group in the future. Recruitment strategies will include presentations during student research events, the distribution of flyers with QR codes, and mass emails targeted at the population. Inclusivity efforts will ensure the representation of students with learning or cognitive disabilities and minors with parental consent. Participants' confidentiality and well-being will be prioritized, and resources will be available for support. The study seeks to showcase the diverse experiences of D/HH students, including first-year students, providing insights into their academic, social, and emotional needs. Findings are expected to inform the development of support services and initiatives to enhance the university experience for d/Deaf and HH students at RIT/NTID and beyond. Enhancing the voices of this often-marginalized population, this research contributes to the broader discourse on inclusive education and student support in higher education settings.

5 ***Deaf acculturation and mental health treatment seeking***

Student: Sean Cosslett
Advisor: Allison Fitch

The intersectionality of deaf individuals' acculturation identities and their willingness to seek mental health treatment can profoundly impact their well-being. Cultural and communication differences can cause reluctance to seek mental health treatment. This study aims to investigate how Deaf Acculturation Scale (DAS) identities, specifically DASd (Deaf identity), DASH (hearing identity), Bicultural (both Deaf and hearing identity), and Marginal (unaffiliated with Deaf and hearing identity) affect willingness to seek mental health treatment. Participants will be recruited from the Rochester Institute of Technology (RIT) and will be asked to complete a demographic survey alongside four surveys related to attitudes toward mental health services. Understanding the complexity of intersectionality identities can help bridge the gap in health disparities within the deaf community and improve access to interventions and mental health care for deaf individuals.

6	<i>The Deaf and Hard-of-Hearing experience with Emergency Medical services</i> Student: Rhiannon Wagner Advisors: Jason Rotoli, Jenna Stewardson, Deirdre Schlehofer, & Tiffany Panko
<p>Several studies have reported communication challenges within emergency medical services (EMS), particularly with people who do not use spoken English. This has resulted in delayed dispatching and inadequate care. Additionally, EMS providers often rely on bystanders, family, or friends for communication with language-discordant patients despite the legal and ethical implications of this practice. Limited research analyses the deaf and hard-of-hearing (DHH) population, perspectives in communicating with EMS. The current study extends upon a 2022 longitudinal study of Monroe-Livingston County prehospital providers' experiences with treating DHH patients and the effectiveness of introducing an educational training module and communication booklet tool (Rotoli, J.M., et al. (2021). The current study will survey DHH individuals who have had experiences with EMS and analyze responses to determine if current communication strategies are effective and favored by DHH people. We hypothesize that DHH people experience communication barriers with EMS providers, and DHH people who have utilized communication tools, such as the communication booklet introduced by the previous study, when communicating with EMS providers will have greater satisfaction with their experiences. An electronic survey will be distributed throughout the Rochester area through printed flyers, email, and social media platforms such as Instagram and Facebook to recruit approximately 30 participants. Once consent is provided on the first page of the electronic survey, participants will be able to view and answer the study questions. Participation is voluntary and can be discontinued at any time by the user. Participants are also able to skip any questions they do not wish to answer. An optional, separate survey link at the end of the study survey will allow the participant to provide their email address to redeem a \$15 Target gift card for their participation. These two surveys will not be linked to one another. Surveys will remain confidential and only accessible to necessary members of the research team. With the results of this study, we will consider the necessity of any changes to allow for better access to communication and ensure patient rights are being maintained in the prehospital setting.</p>	
7	<i>Removal of Indole from environmental water samples by Carbon Nanotube Aerogels</i> Students: Maameyaa Asiamah, Amadou Diallo, L. James Macisco, Reginald Rogers Advisor: Todd Pagano
<p>Indole is in a category of toxic environmental pollutants found in natural water systems from pharmaceutical, cosmetic, petrochemical, coal mining, and agrochemical industries. The purpose of this study is to determine whether carbon nanotubes (CNTs) in aerogel form can adsorb, and thus, remove indole, which is otherwise somewhat recalcitrant in water, from the environment. In particular, it is important to study how indole adsorbs in the presence of Humic Acid (HA), which is found in almost all natural water systems. In this study, we used fluorescence spectroscopy to examine the removal of indole and/or HA by CNT aerogels over time. We used strategic wavelengths for excitation and emission with special probe equipment to monitor competition between indole and HA for adsorption sites. Results show that when either indole or HA is alone in the water matrix, they adsorb to the aerogel. However, when both are present in the same system, the indole seems to adsorb while the HA does not. This finding indicates that CNT aerogel could be a good technique for removing indole from water, including water that is rich in natural HAs. CNT-based aerogels show potential for the removal of dangerous chemicals from water. Future studies will examine other types of pollutant molecules to test removal efficiencies by CNT aerogels in the presence of interferents, like HA.</p>	
8	<i>Evaluation of conference room webcams for remote interpreting group consultations involving Deaf people</i> Student: Roshan Mathew Advisor: Wendy Dannels
<p>Deaf people, who primarily use sign language, often depend on interpreters for communication access when interacting with other people. Remote interpreters, such as those who provide services through Video Remote Interpreting (VRI) or Video Relay Service (VRS), can interpret via a web portal but not as efficiently as in person due to limited access to the deaf clients' surroundings. This is especially challenging while interpreting consultations involving multiple people and artifacts, such as a printed document, whiteboard, or a projector screen. We developed an application that displays remote interpreting on smart glasses so that deaf clients can focus directly on a speaker instead of dividing their attention between the speaker and the VRI or VRS screens. To investigate whether maximizing the interpreter's access to a deaf client's environment using webcams with an enhanced field of view would help improve the quality of interpreting, we invited 20 interpreters with prior experience working for VRI or VRS for usability testing sessions. The participants evaluated a remote interpreting session simulating a group meeting with hearing and deaf individuals, streamed through four webcams in nine different layout configurations. We discuss the findings that contribute to recommendations for webcam configurations and best practices for remote video interpreting services involving multiple individuals and artifacts.</p>	
9	<i>Molecular sexing of Eastern Screech Owls using feather DNA</i> Students: Lilly Travers & Gabby Orfanides Advisor: Susan Smith Pagano
<p>In bird species that are monomorphic, males and females cannot be distinguished by plumage differences making identification of biological sex challenging. Measurement of body size metrics, accompanied by confirmation of biological sex using molecular means, has the promise of providing a useful tool for distinguishing male and female birds in the field or for museum studies. Molecular sexing of birds involves Polymerase Chain Reaction (PCR) to amplify CHD (chromo helicase DNA binding) genes located on the W and Z chromosomes in birds (female ZW, male ZZ). Although this can be done using blood samples where DNA is extracted from nucleated red blood cells in birds, the extraction of DNA from feathers may provide a more feasible alternative. This study aimed to optimize a protocol for extracting DNA from feather samples. We then tested the viability of the technique for producing reliable molecular sexing using the Eastern Screech Owl (<i>Megascops asio</i>) as the focal species. Feather samples were collected from owls by a collaborating raptor biologist, along with several morphometric measurements on the birds. Feathers were extracted and PCR was performed using 2550F/2718R primers. Once molecular sex was established, we correlated the data using a discriminant function analysis of weight and size measurements in order to assess the reliability of this metric for distinguishing sex in the field.</p>	

2nd Floor-Rosica Hall

10	<p style="text-align: center;"><i>Think Tanks: Incorporated participatory action research into Interpreter Education</i> Student: Lyn Eaton Advisor: Kierstin Muroski</p>
	<p>This poster presentation will show how Participatory Action Research (PAR) can be used within the context of signed language interpreter education. Since 2022, the NTID Research in Interpreter and Translator Education (RITE) Lab has hosted student-centered Think Tanks to facilitate critical thinking, heighten student research engagement, and stimulate new research ideas. These Think Tanks are rooted in the principles underpinning PAR such as democratic participation, social equity, and collective empowerment; thereby sparking a paradigm shift towards inclusivity and collaboration in interpreter education. Reporting on an ongoing research-based case study, this presentation will show the impacts of PAR methodologies within the Think Tank program. Specifically, the impacts on student engagement, research initiatives, and the influence of student insight on departmental changes will be outlined.</p>
11	<p style="text-align: center;"><i>Investigating the Anti-Cancer properties of MKT-077</i> Student: Morgan Singleton Advisor: Gary Skuse</p>
	<p>Many current chemotherapeutic treatment options disrupt the rapid division of cells by interfering with the process of DNA replication, resulting in adverse side effects due to the chemotherapeutic agent's inability to selectively target cancerous cells. We hypothesize that MKT-077, a rhodacyanine dye, interacts with heat shock protein 70 (hsp70), a suppressor of apoptosis that is upregulated in cancerous cells. MKT-077's proposed ability to inhibit hsp70 and selectively target cancerous cells, halts cell division and forces cancerous cells to undergo apoptosis. The cancerous cell lines used in this study include: PA1, ovarian teratocarcinoma, T24, urinary bladder transitional cells and A549, a lung adenocarcinoma line. Non-cancerous control lines include mouse fibroblast NIH 3T3 and African green monkey kidney fibroblast CV-1 cells. Cells were cultured in DMEM, MEM, or McCoy, media and maintained at 37 degrees Celsius and 5% CO₂. Twenty-four hours after seeding, cells were treated with increasing concentrations of MKT-077 and growth trends were measured by counting cells over a 12-hour period. Separately, an in situ TUNEL assay was performed to confirm apoptosis using the Alexa Fluor 488 fluorescent dye. Our results support the contention that MKT-077 is a potentially highly selective chemotherapeutic agent. Cancerous cell lines treated with MKT-077 had a dramatic increase in cell death over a span of 12 hours, in contrast to minimal cell death in non-cancerous cell lines. High levels of fluorescently tagged nuclei were found in cancerous cells after the TUNEL assay when treated with MKT-077, with low levels found in non-cancerous cells. These findings support our hypothesis that MKT-077 promotes apoptosis in cancerous but not non-cancerous cells. These results provide strong evidence that MKT-077 is a potential candidate for a highly selective chemotherapeutic agent in cultured cells.</p>
12	<p style="text-align: center;"><i>Assessing hearing levels and visual acuity</i> Students: Sari Schuman & Tiana Hose Advisors: Peter Hauser & Jessica Contreras</p>
	<p>There is a common belief that deaf children are not as aware of their surroundings as hearing people are due to not being able to hear what is happening. This concern is seen in many pamphlets and brochures for assistive hearing devices, such as from John Hopkins Medicine. Conversely, some people believe that when there is a lack of one sense, other senses become more advanced in order to compensate. We want to further investigate these notions by measuring and comparing the visual abilities of deaf, hearing, and hard-of-hearing people. These subjects (n=50) will be RIT students 18 years of age or older who have good vision. Data will be gathered through the use of Qualtrics and the Sway Medical App. Sway is often used for athletes to measure concussions. Due to this, it has the means to measure visual reaction time, impulse control, and inspection time. These areas will give us insight into the visual acuity of people with various hearing levels. The study aims to evaluate the relationship between hearing level and visual acuity.</p>
13	<p style="text-align: center;"><i>Exploring the impact of gender bias on the perception of sign language</i> Students: Hayden Orr & Gigi Zheng Advisor: Joseph Hill</p>
	<p>This is a continuation of Dr. Joseph Hill's exploratory study of ASL signers' attitudes toward signing initiated in 2022. The purpose of language attitude study is to investigate individuals' bias, belief, and response toward a signers' identity and regional differences. The typical way of doing language attitude studies involves utilizing interviews, data collection methods, and focus groups to gather linguistic data and further understands people's perspective related to language. The use of signing avatars is an innovative way to mask a human signer with an alternative identity. The signing sample was produced by a human signer which was captured via motion capture technology and reproduced by animated signing avatars with the identifiable racial and gender characteristics. The overall goal of the study is to determine whether the differences in the signing perception of the study participants (N=12) could be observed due to racial and gender identities of the avatars. For this presentation, the focus is on the description of the differences in the participants' responses to the gender identity of the signing avatars. During the second round of coding on Dedoose (which is an online qualitative research tool), the interview transcripts have been highlighted and coded based on appearance, facial expression, personality, signing comprehension, and signing production. The current findings showed a nuanced difference in participants' responses to the gender identity of the signing avatars. The participants showed distinct attitudes and bias despite no actual difference in signing production. This study underscores the influence of individuals' identity and gender on their language attitudes and perspectives while showing the need of further research to explore those dynamics in greater depth. Understanding language attitudes within the signer's community can help inform more inclusive language policies and practices, as a result contributing to linguistic diversity and fostering greater societal inclusivity.</p>

14	<i>Deaf, Hard-of-Hearing, and Hearing women's understanding of sexual health</i> Student: Kendall Miller Advisor: Deirdre Schlehofer
<p>This study compared deaf/hard of hearing (DHH) and hearing female college students to determine whether they receive vital health information and access to health screenings and tests. This study examined differences in sexual health knowledge and access between the two groups. There were 31 DHH participants and 38 hearing participants aged 18-26. The questionnaire included contraceptive use, risk behaviors, and sexual health knowledge. The primary purpose of this study is to determine whether college-aged deaf women have an understanding equivalent to college-aged hearing women regarding sexual health, contraceptive use, and STI testing. Preliminary findings indicate that participants who became deaf later in childhood and grew up with spoken languages were more likely not to know where to obtain a pregnancy test or did not have adequate access to birth control options. Further findings showed that sexually active deaf women were less likely to use oral birth control pills or injections when compared to their hearing counterparts; however, both sexually active deaf and hearing women had similar results in terms of other unsafe preventive birth control. From the survey results, we can analyze deaf/hard of hearing and hearing females to improve health literacy among all young women, particularly those in the Deaf community with language barriers in accessing educational resources. Suggestions and possible solutions are to improve linguistic minorities' access to medical information and preventive health care.</p>	
15	<i>Removal of Styrene from water by adsorption to Carbon-based surfaces</i> Students: Amadou Diallo, Maameyaa Asiamah, L. James Macisco, & Reginald Rogers Advisor: Todd Pagano
<p>Styrene (an organic molecule often found in plastics) is present in natural water systems and is an environmental/health concern. Finding ways to remove styrene from water would be very beneficial. The purpose of this study is to determine whether different carbon-based surfaces can adsorb, and thus remove, the styrene from water. In particular, it is important to study how styrene adsorbs in the presence of Humic Acid (HA), which is found in most natural water systems. In this study, we used fluorescence spectroscopy to examine the removal of styrene and/or HA by carbon-based surfaces over time. We used strategic wavelengths for excitation and emission with special probe equipment to monitor competition between the styrene and HA for adsorption sites. Our findings indicate that carbon-based surface adsorption could be a good technique for removing styrene from water, but natural HAs can complicate the adsorption processes. Future studies will examine other types of pollutant molecules and carbon-based surfaces to test removal efficiencies.</p>	
16	<i>The relationship between social media & sleep habits among introverted & extroverted college students</i> Student: Donna Melena Advisor: Rain Bosworth
<p>The present study aimed to investigate the relationship between sleep patterns and social media behavior among introverted and extroverted college students. About a total of 300 participants (150 introverted and 150 extroverted) from various academic disciplines are aiming to be recruited for this research. The participants completed a series of questionnaires and provided data on their sleep habits, social media usage, and personality traits. Our findings revealed distinct differences in sleep patterns and social media behavior between introverted and extroverted individuals. Introverted students reported higher levels of nighttime social media engagement, which correlated with delayed sleep onset and shorter sleep duration. In contrast, extroverted students exhibited more frequent daytime social media usage, leading to disrupted sleep quality and increased daytime fatigue. Moreover, the study identified that introverted individuals tended to use social media as a means of passive social interaction, while extroverted individuals utilized social platforms for active engagement and networking. These behavioral patterns had significant implications for overall well-being, academic performance, and mental health outcomes. The implications of these findings underscore the need for targeted interventions and educational programs to promote healthy sleep habits and responsible social media usage among college students, taking into account their individual personality traits. By understanding the unique interactions between sleep, social media, and personality types, educators and health professionals can design tailored strategies to support the holistic well-being of diverse student populations. This research contributes valuable insights to the fields of psychology, education, and public health, highlighting the importance of personalized approaches in addressing the complex interplay of sleep and social media behavior patterns among college students.</p>	
17	<i>Subjective and objective memory performance across the lifespan: An exploratory study</i> Student: Bo Allaby Advisor: Rebecca Houston
<p>Is one's subjective, or perceived memory performance reflective of his/her objective, or actual memory performance? Does this change with age? Aging is associated with decline in specific memory subtypes, including working and prospective memory, while others (e.g., procedural and episodic memory) may remain stable. There is mixed evidence for a link between subjective and objective memory. Additionally, a meta-analysis by Crumley <i>et al.</i> (2014) observed a small yet stable positive association between subjective and objective memory in those aged 60 years and up, but the exact influence of age remains unclear. Subjective memory complaints with age may indicate awareness of cognitive aging, rather than increased presence of memory problems. Thus, it is worth exploring memory self-efficacy, which refers to beliefs about one's memory abilities and confidence towards managing them. This study aims to investigate associations between subjective and objective memory performance, as well as memory self-efficacy. Twelve participants (M = 19.5 years, SD = 1.62) completed self-reported measures of memory and memory self-efficacy, as well as objective memory measures. Better subjective memory was associated with higher performance on objective measures ($r = 0.64$, $p = 0.03$). Five out of 12 participants exhibited poorer subjective memory compared to their objective performance, suggesting that objective measures may be more representative of one's true memory abilities, however, a larger sample is necessary to increase confidence in these preliminary findings. Data collection is ongoing, and age effects will also be explored by creating age groups and conducting more sophisticated analyses.</p>	
18	<i>The importance of humor in healthy relationships</i> Student: Cathleen Jolly Advisors: Rain Bosworth & Jess Cuculick
<p>This study examines the significance of humor in fostering healthy relationships among college students, particularly within the diverse academic landscape of RIT. Through surveys distributed among students from various RIT colleges, I aim to understand their perceptions of humor's role in relationships and its potential positive and negative effects. By exploring differing viewpoints across academic disciplines, my research seeks to contribute to a deeper understanding of how humor influences interpersonal dynamics among college students. This study holds implications for promoting healthier and more satisfying relationships within university settings.</p>	

19	<i>BSI Benchmark: Phase one preliminary results</i> Students: O'Neill & Ella Stuck Advisors: Jason Listman & Peter Hauser
	<p>Interpreting students need to demonstrate advanced signed language skills before learning interpreting skills; however, research is limited within ASL and interpreting education. This is a two-phase project to evaluate interpreting students' ASL proficiency in the Bachelor of Science in Interpretation (BSI) program. Both phases use proficiency tests, and diagnostic tests to assess their ASL development. Phase One consisted of a cross-section of the program which will inform Phase Two. Phase Two will be a 7-year longitudinal project that tracks students' ASL proficiency throughout the program. Preliminary Phase One results from the first-year interpreting students (N=36) are discussed. This will provide the research community with insight into the process of learning ASL as a second language (L2) as a hearing adult and improve the curriculum of the BSI program.</p>
20	<i>Deaf and Hard-of-Hearing perspectives on sex education and gaming</i> Student: Emma Kane Advisor: Jenna Stewardson
	<p>Prior research has shown that deaf and hard of hearing (DHH) individuals reported to have lower health literacy when compared to hearing individuals. A determined factor is the lack of access to health literacy. The access to sexual health information is significantly lower for DHH young adults. Current literature review shows that the lack of accessible and inclusive comprehensive sexuality education (CSE) can contribute to the lower understanding of sexual health in the DHH community while also in respect to the recent changes in policies. Although there is insufficient research on sex education for DHH young adults, research has proven that providing CSE can lead to a decrease in likelihood of unintended pregnancies and STIs; promote appreciation of diversity, upstander actions, and knowledge of consent. The aim of this research study is to explore gaps and barriers in sex education for DHH young adults by creating an accessible survey using ASL translations. This survey will ask 40 DHH participants about their demographic information, prior experiences, and opinions on the future of sex education. Data collected from this study will help us to understand if educational gaming can be applicable to benefit DHH young adults and the role of policies in reducing access to sex education. Thus, we can design innovative and accessible education gaming in order to increase access to sex education for DHH young adults.</p>
21	<i>Electronic spectroscopy of bird plumage coloration</i> Students: L. James Macisco & Lauren Walter Advisors: Susan Smith Pagano & Todd Pagano
	<p>The diverse array of colors displayed by avian plumage is the result of a variety of pigments and feather structures. The source of pigments is often from the foods that the birds eat (and the metabolism of those pigment molecules). Plumage color patterns can be characterized through reflectance spectroscopy and can help to give clues as to the nature of the pigment responsible for the coloring. Using non-invasive fiber optic-based spectroscopy in the visible wavelength range, we measured the reflectance of plumage from preserved, whole-bird specimens (and extracted feathers) representing a variety of passerine and non-passerine families. Our data reveal spectral characteristics of carotenoid-like pigments, particularly for yellow, orange, and red birds. Chemical extracts show the spectral changes of the carotenoids when removed from the feather structure. In the future, we hope to continue refining our methods and investigate the reflectance spectra of food sources that might be responsible for the plumage coloring.</p>
22	<i>Usability testing: Prototype RxASL app for DHH students</i> Student: Lemmy Wathan Advisors: Mariam Paracha, Aaron Parker, Walter Bubie, & Wendy Dannels
	<p>Studies have shown that Deaf and Hard-of-Hearing (DHH) individuals often exhibit low health literacy skills, with a preference for videos over text for conveying health information. This study will aim to conduct usability testing on a prototype RxASL app that is developed specifically for DHH individuals to assess their health literacy levels and method preferences for information delivery. The hypothesis is DHH adults cannot understand the prescription medication information that was provided by their doctor or pharmacist, and certain health apps do not accommodate the DHH's preferred method of visual communication. Sixteen DHH students from RIT/NTID at least 18 years of age, who sign ASL exclusively will be recruited. They will form two groups based on a health literacy screening instrument. Participants will be interviewed under a structured usability testing process, which includes questioning, testing the app in written and signed ASL, and checking their understanding about two medications using the prototype RxASL and Apple Health app. The prototype app will have three features which includes signed ASL videos only, captions, or transcripts for the participants to choose from. The findings from this study will be shared. Hopefully this study holds significant implications for enhancing health literacy among DHH individuals through technology-based interventions and ultimately contributing to improved healthcare access and outcomes for the DHH population.</p>

Special thanks to the 2024 NTID Student Research Fair planning committee: Todd Pagano, Hope Williams, Laurie Furibondo, Jessica Contreras, and Jorge Samper.

Funding is available to support RIT/NTID student researchers!

Student Research Microgrants

Students (with approval of a faculty mentor) can apply for a microgrant (up to \$1,000) to support a specific research project. Funds could be given to students in need of purchasing a software program, piece of equipment, chemical, etc. in order to conduct research. Faculty members who want to start new/pilot research projects are specifically encouraged to have their students apply. These microgrants are predominantly for supplies and are not eligible to be paid as stipends or for travel.

Summer Undergraduate Research Fellows (SURFs)

Stipends are available, through a competitive process, for students who conduct research with a faculty member during a summer appointment.

Support for Student Conference Travel

Students who have made significant research progress can apply for funding to present their findings at professional conferences within the U.S. Limited funds can be used to support airfare, registration, lodging, etc. for student conference presentations.

Undergraduate Research Courses

NTID has credit-bearing Undergraduate Research courses available to allow students to receive course credit for being involved in faculty-led research projects.

For more information, go to: <http://www.ntid.rit.edu/student-researchers/>