College of Health and Human Services
Department of Occupational Therapy
Western Michigan University

SAMMONS CENTER
FOR INNOVATION AND RESEARCH
IN OCCUPATION BASED TECHNOLOGY

Request for Proposals

The Sammons Center for Innovation and Research in Occupation Based Technology invites proposals for funding awards of up to $3000.00 for a product that will enable people to actively engage and participate in everyday occupation. These products can be devices, technology apps, teaching and learning technologies, and other innovative ideas. The Sammons Center WILL NOT fund personnel or indirect costs. The grant applicant may use funds from the award towards fees that directly support the innovation, such as consulting fees for the design of a product including mechanical, print, video, or computer based applications.

APPLICATION

Proposals are accepted throughout the year with no set deadlines. Fill out pages 1-9 and pay close attention to the comments to guide you through the application. Please submit your proposal to Dr. Holly Grieves, Co-Director, Sammons Center at holly.grieves@wmich.edu.

Will Harahan	WMU Student Occupational Therapist
Name(s) of Lead Innovator(s)	Credentials of Lead Innovator
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Grant Proposal: Equitable Access to Leisure: Implementing Adaptive Fishing Equipment at the WMU Center for Disability Services

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Section A: Resume or CV of lead innovator and team members

William J. Harahan
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Education:

- Bachelor of Arts in Psychology Graduation Date: May 2023
  - *Hope College, Holland MI*
- Doctorate of Occupational Therapy Expected Graduation Date: April 2026
  - *Western Michigan University, Kalamazoo, MI*

Level I Fieldwork Experiences:

Location: Marion R. Spear Occupational Therapy Clinic, 1000 Oakland, Dr, Kalamazoo, MI 49008
Clinic Description: A student-led occupational therapy clinic supervised by board-certified occupational therapists in order to provide clients customizable treatment plans in order to help them meet their goals.
Dates: May 8th, 2024 - August 8th, 2024
Dates: August 28th, 2024 - December 5th, 2024

Location: Kalamazoo Psychiatric Hospital, 1312 Oakland Dr, Kalamazoo, MI, 49008
Clinic Description: An occupational therapy clinic supervised by board-certified occupational therapists in order to provide KPH patients with customizable treatment plans in order to help them meet their goals .

Student Occupational Therapist:

- Explain diagnoses to families and educate them on how to make their clients successful at home
- Conduct assessments to gather data and an idea of where the client is in terms of their life skills
- Provide interventions that include therapeutic/purposeful activities to clients that directly addresses their deficits and struggles
- Document client progress, insurance billing codes, evaluation of client's performances during interventions

Work Experience:

Center for Disability Services. Western Michigan University (2023-Present)
- Build relationships with clients through open communication, emotional support, and physical availability

- Take care of clients and their physical/emotional needs through therapeutic activities, ADL practice, and community outings.

Hope College Dow Gym Supervisor, Holland, MI (2022-2023)

- Manage employees, oversee time cards, and establish a communication pipeline between 4 different employees per shift
- Clean weight room equipment and lock the building
- Handle equipment and court reservations over the phone

Hope College Residential Assistant, Holland, MI (2022 - 2023)

- Community builder with 36 residents of a college dormitory
- Focus on making student's college experiences meaningful through interpersonal communication and emotional availability
- Planning community events and activities for each resident to provide input

Premier Pet Supply Stock Boy, Beverly Hills, MI (2021-2023)

- Refilling the store shelves when products are running low
- Customer service through recommendations of certain products to meet pet's needs
- Janitorial duties (E.g. wiping counters, sweeping tables, changing trash, disinfecting dog showers)

Kruse and Muer on Woodward Carry Out, Royal Oak, MI (2020-2021)

- Delivered curbside food orders to customers
- Communication through the phone to customers placing carry-outs
- Prepared food sides and applying proper sanitation methods in the kitchen

Volunteer Experience:

Freedom Village, Developmental Psychology Field Placement, Holland, MI (2020-2020)

- Observed the interactions between the staff and residents
- Participated in therapeutic activities and had meaningful conversations with the residents
- Developed a deeper understanding of mental and physical struggles

Certifications:

- CPR: American Heart Association Basic Life Saver Expiration Date: 05/2027

Section B. Project Description

Background

Leisure activities like fishing provide therapeutic benefits, especially for individuals with disabilities. Fishing promotes social engagement, stress relief, fine motor practice, sensory regulation, and overall well-being. Unfortunately, traditional fishing equipment often excludes individuals with limited grip strength, limb mobility, or physical stamina.

Client Population

The WMU Center for Disability Services (CDS) supports adults with intellectual and developmental disabilities, many of whom also experience physical challenges such as hemiplegia, spasticity, or limited upper extremity coordination. CDS has expressed strong interest in expanding access to inclusive outdoor recreation opportunities, with adaptive fishing emerging as a key area of interest. This grant proposes obtaining and implementing adaptive fishing equipment to provide participants with access to an activity that has traditionally been out of reach. In addition to enhancing recreational opportunities, this initiative will help identify user needs and potential areas for future equipment design and innovation.

The Product

This grant proposes obtaining and evaluating commercially available adaptive fishing rods and accessories—such as those from Fishing Abilities, Handi-Cast, and Reel Deal Adaptive Equipment—with the goal of identifying facilitators and gaps in current designs. These devices, which include adapted grip systems, mounted reels, and sip-and-puff mechanisms, enable individuals with limited hand dexterity or upper body mobility to engage in fishing. All equipment will be assessed for usability and safety in outdoor settings, informing future innovation and potential design improvements tailored to this population.

Intended Outcome

To create an inclusive fishing program for up to 15 participants with disabilities, providing equal opportunity to engage in meaningful leisure through adaptive equipment. The fishing program will be incorporated into summer and fall outdoor rec days at WMU CDS and will be reusable for future client cohorts.

Section C. Pictorial Demonstration of Innovation

Adaptive Fishing Pole Mount

Image example from FishingAbilities.com – clamp-style arm mount designed for wheelchair use

Electric Fishing Reel Button Controller

Image example from Reel Deal – push-button powered reel for limited dexterity

Participant with Adaptive Rod

A participant using a rod with adaptive grip and reel mount system during a community event

Section D. Line-Item Budget Plan

Item	**Cost**	**Justification**
Fishing Abilities Adaptive Fishing Rods x4	$175 each = $700	Includes trigger reel, adaptive grip, and universal mount. Allows independent casting with limited hand function.
Reel Deal Adaptive Electric Reel System x1	$435	Push-button reel control for clients with low strength or limited dexterity. Can be mounted to a wheelchair.
Handi-Cast Rod Mount System x2	$295 each = $590	Wheelchair-accessible rod mounts with universal clamp. Swivel base for ergonomic adjustment.
Plano Waterproof Tackle Box + Adaptive Tackle	$140	Safety tackle (barbless hooks, weights, bobbers) stored in

		accessible containers for independent setup.
Fishing Licenses for Program Participants	$150	Group license fees for 15 participants during 2025 recreational fishing season.
Folding Adaptive Chair with Rod Mount x2	$135 each = $270	Lightweight, folding chairs with integrated rod holders for clients not using wheelchairs.
Storage Cart for Equipment	$210	Portable, weather-resistant storage for transporting equipment to and from outdoor fishing locations.
Educational Laminated Visuals & Safety Booklets	$130	Accessible, step-by-step guides to using equipment and staying safe near water. Includes visuals for cognitive support.

Total: $2,625

Remaining $375 reserved for minor equipment repairs or replacements during the pilot season.

Section E. Implementation Plan

Stage	Outcome	Contributors
Summer 2025	Order and test adaptive rods and mounts. Trial run with 2-3 clients.	Lead Innovator, WMU CDS Staff
Fall 2025	Launch official adaptive fishing day with full cohort of roughly 20-25 participants. Monitor participation and safety.	Lead Innovator, CDS Rec Therapists

Winter 2026	Staff training on maintenance and future independent use. Develop sustainability protocols.	Lead Innovator, CDS Staff
Spring/Summer 2026	Prepare for second season of fishing with new clients. Expand participation.	CDS Activity Coordinators

Section F. Evaluation Plan

Stage	Outcome	Evaluation Method
Pre-Implementation	Understand client interest and accessibility needs	Survey and client interviews
Midpoint (Fall 2025)	Measure engagement and ease of use	Staff logs, feedback forms, video review
Post-Program	Assess improvements in leisure engagement and client satisfaction	Post-program survey, semi-structured interviews
Sustainability	Develop training guides and standard protocols	Completion of visual manuals and handoff meeting with staff

Section G. Conclusion

This capstone project aims to bridge the gap between the therapeutic benefits of outdoor recreation and the accessibility needs of individuals with disabilities. By implementing and evaluating adaptive fishing equipment within the WMU Center for Disability Services, the project seeks to empower participants—many of whom face significant physical and cognitive challenges—with the opportunity to engage in a meaningful, inclusive, and socially enriching leisure activity.

Through the careful selection and trial of commercially available adaptive fishing tools, this initiative not only enhances immediate recreational opportunities for up to 15 clients, but also serves as a platform for longer-term innovation in adaptive recreation. The project fosters a spirit of dignity and autonomy by enabling individuals with limited hand function, dexterity, or mobility to actively participate in a traditionally inaccessible pastime. Additionally, the program creates a replicable framework for future implementation, ensuring that inclusive fishing remains a sustainable part of the WMU CDS offerings for years to come.

Ultimately, this capstone is about more than fishing—it's about removing barriers, promoting wellness, and honoring the right of every individual to enjoy nature, community, and the simple joys of leisure. Through inclusive design and thoughtful implementation, it plants the seed for continued growth in accessible outdoor recreation, helping redefine what's possible for people with disabilities.

Section H. Resources

References

Adaptive Fishing Equipment. (2024). *FishingAbilities.com*. Retrieved from https://www.fishingabilities.com

Reel Deal Adaptive Fishing Reels. (2024). *ReelDealOutdoors.org*. Retrieved from https://www.reeldealoutdoors.org

Occupational Therapy Practice Framework, 4th Edition (2020). *American Journal of Occupational Therapy*, 74(Supplement_2), 7412410010p1–7412410010p87. https://doi.org/10.5014/ajot.2020.74S2001

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