

NAU/IHD  
Proposal

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18

## Rural Arizona Autism Project (RAzAP)

**Statement of Need:** Individuals who are diagnosed with Autism Spectrum Disorder (ASD) are often excluded from opportunities to participate in family, school, and community activities. Parents who are members of minority groups, such as Native Americans, are more likely to have difficulty accessing specialized services for their children with disabilities (Liptak et al., 2008). Additionally, health and educational services to help children with ASD and their families are often absent or scarce in rural communities of Native Americans, such as the Navajo Nation. Rural communities may lack trained professionals to provide diagnostic and intervention services for children with ASD (Vohra, Suresh, Sambamoorthi, & St. Peter, 2013). Efforts in Northern Arizona by early intervention programs, local healthcare providers, and the Institute for Human Development's (IHD's) Developmental Clinic have resulted in earlier identification of children with ASD. However, once diagnosed, the options for available evidence-based treatments for native families are lacking. There is a need for interventions for children with ASD in rural Arizona that can be delivered in an efficient and cost-effective manner. Moreover, interventions in native communities must be flexible enough to accommodate for cultural differences.

**Description of the Project:** The title of our proposed project is the "Rural Arizona Autism Project". We are requesting funding to train our team to implement an evidence-based intervention called the PLAY (Play and Language for Autistic Youngsters) Project for children with ASD on the Navajo Nation. This project will focus on the school-based component of the PLAY Project called Teaching PLAY.

Recent interventions for children with ASD have shifted the focus onto ways of increasing social participation for children with ASD. These interventions are referred to as the social-pragmatic

approach (Solomon, Necheles, Ferch, & Bruckman, 2007). Such interventions have shown to increase positive childhood outcomes (e.g. health, wellbeing, development) as well as reduce caregiver burden, which is commonly observed in caregivers of children with ASD and other developmental disorders (Mahoney & Solomon, 2016). One of these social-pragmatic parent mediated interventions is the PLAY Project, developed by Richard Solomon, a developmental pediatrician (2007). The PLAY Project philosophy is that intensive play-based interventions provide rich, playful, and engaging opportunities that help the child process information in a more organized and efficient manner. This allows the child with ASD to begin to understand the complexity of the world (Solomon, 2012).

Rather than a direct treatment model, the PLAY method is an evidence-based parent and teacher-mediated model of intervention for children diagnosed with ASD. It requires much less time on behalf of the professionals (3-4 hours direct coaching per month), and that time is used to train and empower families and teachers to learn how to help children in terms that correlate with their situation and culture. As in other social pragmatic models, parent and teacher sensitivity is promoted, and adults are coached to correctly read the child's gestural cues and respond to the child's cues, lead, and intentions. The coaching model is used to provide adults with activities and techniques that will assist them in playing with the child at the just right level or the level where they are following the child's lead but also giving the child an appropriate challenge. In following the child's lead, parents and teachers help to increase the number of contingent reciprocal social exchanges referred to as circles of communication. (Solomon, 2012).

The Teaching PLAY component is a classroom-based application of the PLAY Project that may be implemented in early education environments with training targeting preschool and

kindergarten staff. Teaching PLAY improves the teachers' capacity to facilitate the development of children with ASD. This teaches them how to use a naturalistic approach to interacting, learning, and communicating that is both rewarding and meaningful (PLAY Project, 2018).

**Key Staff:** Two speech-language pathologists and one occupational therapist from IHD have completed the PLAY Project certification course that consisted of a two-day intensive workshop in Ann Arbor, Michigan and the online training. Through this coursework, they learned to implement PLAY methods and techniques and to document child developmental progress. They are currently completing the final phase of certification that consists of supervision and mentoring. This includes the implementation of the PLAY Project in home settings with families in the early intervention program--Growing in Beauty (GIB) on the Navajo Nation. Funding from ADDPC will support the PLAY Project Consultants (PCs) in completing the Teaching PLAY component or the PLAY Project methods and techniques in school settings. The following are the key staff for this project:

**Maureen Russell** is a Registered Occupational Therapist, early interventionist, and researcher. Her research has focused on families who have children with ASD, on sleep health in caregivers and children with developmental disabilities, and on health disparities. Maureen will have primary responsibility for the coordination of project activities. Through this project, she will deliver the intervention as a PC to two students in the preschool program at Tuba City Unified School District.

**Erika Palm** is a Speech-Language Pathologist and an early interventionist in a Part C program that provides services to children with developmental disabilities aged birth to 3 on the Navajo Nation. She has extensive experience with children with autism in home and school settings.

Erika will deliver this intervention to two students in the preschool program at Chinle Unified School District.

**Yolanda Ramos-Edgerly** is a Speech-Language Pathologist and an early interventionist in a Part C program that provides services to children with developmental disabilities aged birth to 3 on the Navajo Nation. She has worked as a school-based Speech-Language Pathologist, and she has extensive experience with children with autism and developmental disabilities. Yolanda will deliver the intervention for this project to two students in the preschool program at Tuba City Unified School District.

**Community Liaison-To Be Hired.** The Community Liaison will be a community member and will be familiar with the culture and resources that are available on the Navajo Nation. The Community Liaison will collaborate with the PCs and preschool staff to assist families of children receiving this intervention to obtain other health, social, and educational services that support them and contribute to family stability and quality of life. Qualifications for this position will include an awareness of the impact of disabilities on families, a knowledge of local and state resources for families of children with autism, and an ability to build rapport with families. The Community Liaison will contact health and educational professionals on the Navajo Nation and provide information about the PLAY Project and Teaching PLAY.

Handwritten notes:  
What from the Navajo tribe  
or what is Navajo?

**Methodology**

*Setting and Participants.* This project will target Navajo children aged 3 to 5 years old with a diagnosis of ASD or at-risk for ASD, who attend preschool and live on the Navajo Nation in Arizona. The Teaching PLAY intervention will be implemented in preschools in two school districts on the Navajo Nation--the Tuba City Unified School District and the Chinle Unified

School District. These schools have expressed interest in Teaching PLAY and are currently discussing with IHD procedures, such as a review of PC liability insurance, that are needed to comply with their school district policies.

*Recruitment.* Parents of children who have a diagnosis of ASD or a diagnosis of at-risk of ASD from a qualified health care professional will be invited by the district preschool teacher to participate in the Teaching Play intervention. If the parent expresses interest in participating, the preschool teacher will arrange a meeting between the parent and the PC interventionist. The parent will be given introductory information about Teaching PLAY and will be encouraged to ask the PC questions about the intervention. If the parent is interested in having their child participate, they will be asked to sign a form--“Permission to Participate in Teaching PLAY”. This permission form will outline the components of the intervention, the timeline for implementation, and the responsibilities of the PC and preschool staff. Parents will also be asked to sign “Release of Information” forms to allow the PC to access relevant educational and medical records.

### **Teaching PLAY Intervention Activities**

*Teaching PLAY Introduction.* A primary goal of Teaching PLAY is to train classroom staff in the implementation of the principles, methods, and activities that will increase positive interactions, reduce negative behaviors, and integrate students in appropriate interactions with their peers. To facilitate this collaboration with the school, the PCs will present an introductory workshop on Teaching PLAY to preschool staff. This workshop will provide foundational information about the PLAY Project model, current research, and implementation in the classroom setting. The PCs will assist the preschool staff in amending the student’s Individualized Educational Plans (IEPs) to reflect the Teaching PLAY intervention, as needed.

*Measures.* The PCs will measure the child's current level of performance, and they will record aspects of the classroom environment that support social-emotional growth. Additional measures will assess staff knowledge acquisition and program satisfaction.

Functional Emotional Assessment Scale (FEAS): The PCs will assess the child's social functioning using the FEAS with videotapes from the initial visit and the final visit. The FEAS will function as both a child social-emotional outcome measure and as a starting point for the intervention. The FEAS has 6 sections and 34 items based on Greenspan's 6 functional developmental levels (FDLS). These levels progress from FDL 1 or basic attention, FDL 2 or engagement, FDL 3 or 2-way purposeful exchanges, FDL 4 or problem solving, FDL 5 or consistent use of words, FDL 6 or pretend play, emotional thinking, and complex interaction. Items are rated as 0 (not at all or very briefly observed), 1 (observed several times and present some of the time), or 2 (observed several times and consistently present). Items are summed to compute a raw score with a higher raw score indicating greater social-emotional development (Greenspan, DeGangi & Wieder, 2001).

PLAY School Environment Assessment (PLAY SEA): The PLAY SEA will also be administered pre- and post-intervention. This tool describes the key outcomes to be achieved in the classroom as a result of the Teaching PLAY intervention program. The 7 identified domains are 1) sensory environment, 2) sensitivity or reading children's cues, 3) responsiveness of following the children's lead, 4) effectiveness or getting reciprocal interactions, 5) interacting at the right functional developmental levels, 6) peer-to-peer interaction, and 7) fun in the classroom. Each domain is rate based on classroom observation on a scale of 1 or observed less than 10% of the time, to 5 or observed greater than 75% of the time (PLAY Project, 2018).

Teaching PLAY Self-Assessment and Knowledge Tests: A measure of pre- and post- knowledge will be completed by preschool staff before and after the introductory Teaching PLAY workshop. An additional measure of pre- and post-knowledge of PLAY methods and techniques will be completed before and after the completion of the intervention.

Satisfaction Surveys: At the completion of the intervention, preschool staff and parents of participating students will complete satisfaction surveys.

*Teaching PLAY Intervention.* Following the collection of the students' present level of functioning, a plan and goals for each child will be developed and the Teaching PLAY intervention will begin. The intervention will consist of 6 half-day classroom visits by the PC: 3 in Spring semester and 3 in Fall semester. The PC will observe and collect video of the child's interactions with school staff. The PC will then coach and model methods, techniques, and activities that follow the child's lead but challenge the child to expand their social-emotional skills. A debriefing session with the preschool staff will follow the half day visit at scheduled times (lunch hour, after school), and the PC will facilitate discussion, review video, and provide strategies for classroom implementation. In May 2019, at the end of the school year and in December 2019 at the completion of the Teaching PLAY intervention, the PC will meet with the preschool staff to provide the staff an opportunity for reflection and feedback.

*Parent Education and Support.* Additionally the PCs will meet with the parents of the children in the intervention 1 to 2 times over the summer. The purpose of the home visit will be to train parents in basic PLAY Project methods and to help the children generalize their new skills to the home environment. Parent will be asked to provide feedback regarding changes that they may have observed in their child's functioning over the course of the intervention.

The Community Liaison will guide the family, as needed, in obtaining services and supports that will assist them in caring for their child with ASD. The Community Liaison will meet with each of the 6 families at the start of this project and determine their strengths, needs, and priorities. From this information, the community liaison will assist the family in developing a plan to access needed resources and supports. The Community Liaison may assist with a variety of tasks, such as, helping caregivers complete applications for housing, arranging evaluations for Supplemental Security Income (SSI) Disability Benefits, encouraging family members to seek mental health counseling, or referring families to tribal programs for firewood.

*Capacity Building and Sustainability.* IHD is actively seeking funding sources through fee-for-service contracts to support the diffusion of this intervention to children with ASD in Northern Arizona. The Community Liaison will make contact with the physicians from Indian Health Services, special education teachers from preschools and elementary schools, and service coordinators from the Division of Developmental Disabilities for the purpose of informing them of the PLAY Project as an intervention option. IHD is additionally pursuing grants to fund research of PLAY Project efficacy and to fund training of other professionals on the Navajo Nation in the PLAY Project method.

**Goals and Objectives:**

- 1) Build the capacity to deliver the PLAY Project intervention to children in Northern Arizona who have a diagnosis of ASD.
  - a. Completion of the Teaching PLAY certification by three PCs at IHD.
  - b. Improve awareness on the Navajo Nation of the PLAY Project intervention.
  - c. Determine the feasibility and the acceptability of Teaching PLAY in two preschools on the Navajo Nation.



- 2) Deliver the PLAY Project intervention in two preschools on the Navajo Nation.
- a. Improve the social-emotional skills of six children with ASD who attend preschool on the Navajo Nation.
  - b. Assist families who have children with ASD in accessing needed resources and services.

**Timeline RAzAP**

Month	Activity	Personnel	Goals/ Objectives
January, 2019	Hire Community Liaison	PCs with IHD Administrators	1b, 2b
	Meet with school staff to determine scheduling and procedures	PCs	1b, 1c
	Contact families and provide information about the PLAY Project	PCs	1b, 2a, 2b
	Complete necessary paperwork (permissions, changes to IEPs) with parents and school staff	PCs	1c, 2a
	Present Teaching PLAY Workshop for school staff in preschool	PCs	1b, 1c, 2a
February, 2019	Complete pre-tests with students in the intervention.	PCs	2a
	Begin Teaching PLAY intervention	PCs	1a, 1b, 2a
	Contact families, complete family needs survey, and set goals	Community Liaison	2b
March-May 2019	Continue Teaching PLAY intervention	PCs	1a, 1b, 2a
March-December 2019	Meet with family regularly and assist in meeting goals	Community Liaison	2b
May, 2019	Meet with school staff	Community Liaison, PCs	1b, 1c
June-July 2019	Meet with families of preschool students in their homes	PCs	1b, 2a
August, 2019	Meet with school staff to determine scheduling and procedures	PCs	1b, 1c
September-November, 2019	Continue Teaching PLAY intervention in the school	PCs	1a, 1b, 2a

November-December, 2019	Contact of health care and educational professions for future referrals	Community Liaison	1b
December 2019	Complete post-tests for students in the intervention	PC	2a
	Final visits with families	Community Liaison	2b
	Review of child outcomes & progress Program evaluation Final report to ADDPC	Community Liaison, PCs	1b, 1c, 2a, 2b

### References

- Greenspan, S., DeGangi, G., & Wieder, S. (2001). *Functional Emotional Assessment Scale*. Bethesda, MN: Interdisciplinary Council on Developmental and Learning Disorders.
- Liptak, G. S., Benzoni, L. B., Mruzek, D. W., Nolan, K. W., Thingvoll, M. A., Wade, C. M., & Fryer, G. E. (2008). Disparities in diagnosis and access to health services for children with autism: data from the national survey of children's health. *Journal of Developmental & Behavioral Pediatrics*, 29(3), 152-160.
- Mahoney, G., & Solomon, R. (2016). Mechanism of developmental change in the PLAY project home consultation program: Evidence from a randomized control trial. *Journal of Autism and Developmental Disorders*, 46(5), 1860-1871.
- PLAY Project. (2018). About the PLAY Project. Retrieved from <http://www.playproject.org>
- Solomon, R., Necheles, J., Ferch, C., & Bruckman, D. (2007). Pilot study of a parent training program for young children with autism: The PLAY Project Home Consultation program. *Autism*, 11(3), 205-224.
- Solomon, R. (2012). The PLAY project: A train-the-trainer model of early intervention for children with autism spectrum disorders. In L. Gallo-Lopez & L. Rubin (Eds.), *Play-based interventions for*

*children and adolescents with autism spectrum disorders* (pp. 249-269). New York, NY:  
Routledge.

Vohra, R, Suresh, M., Sambamoorthi, U., St. Peter, C. (2013). Access to services, quality of care, and family impact for children with autism, other developmental disabilities, and other mental health conditions. *Autism*, 1-12.

# Budget Request Form

Contractor Name: ABOR for and on behalf of Northern Arizona University/Office of Sponsored Projects

Contractor Address: 1395 S. Knoles Drive, Ste 252 (ARD, bldg. 56) Flagstaff AZ 86011  
Street Address City State Zip

Project Name: Rural Arizona Autism Project (RAzAP)

Budget Category	Requested ADDPC Funds	Non-Federal Cash Match	Non-Federal In-Kind Match	Total Program Cost
Personnel/Salaries	23,992		5,375	29,367
Fringe Benefits	9,270		1,697	10,967
Supplies / Operating Expenses				-
Travel	8,086			8,086
Rent or Cost of Space				-
Contracted Services / Professional Services				-
Administrative / Indirect Costs	4,135		8,642	12,777
<b>Total Costs</b>	<b>45,483</b>	<b>-</b>	<b>15,714</b>	<b>61,197</b>

It is understood that Non-Federal Funds identified in this budget will be used to match only ADDPC Federal Funds, and will not be used to match any other Federal Funds during the period of the ADDPC funded Project.

Additional description and background information shall be included as a budget narrative, including for match. The contractor agrees to submit additional background information to the ADDPC upon request.

Patricia Cornette  
 Name of Certifying Official

Director, Pre-Award  
 Title of Certifying Official

(928) 523-4880 NAU-OSP@nau.edu  
 Phone Email

## Budget Justification

### Rural Arizona Autism Project

#### PERSONNEL

*Maureen Russell* will devote 8% effort (1.0 Person-Month) during the year to this project. She will assist the schools and PLAY Project Consultants (PCs) in coordinating this project. Maureen will also be a PC and deliver the Teaching PLAY intervention for 2 students with autism at Tuba City Unified School District and will be responsible for all activities related to the intervention.

*Erika Palm* will devote 11% effort (1.3 Person-Month) during the year to this project. She will deliver the Teaching PLAY intervention to 2 students with autism at the Chinle Unified School District and will be responsible for all activities related to the intervention. The Chinle preschool site is a greater distance from Flagstaff than the Tuba City site, therefore more time is needed for Erika to travel.

*Yolanda Ramos-Edgerly* will devote 8% effort (1.0 Person-Month) during the year to this project. She will deliver the Teaching PLAY intervention to 2 students at Tuba City Unified School District and will be responsible for all activities related to the intervention.

*The Community Liaison (to be hired)* will devote 11% effort (1.3 Person-Month) to this project. She will visit families who have children participating in this project in both the Tuba City and Chinle areas. The Community Liaison will assist families with acquiring other health, social service, and educational resources. This is a part-time position with limited fringe benefits.

#### Fringe Benefits

Employee-Related Expenses (ERE) are estimated and are calculated by dividing the employee's salary by the total cost of their benefit package. Benefits include health (\$19,851 per family), dental (\$173 per family), life (\$17.94 annually), disability (.12%), FICA (6.2%), Medicare (1.45%), and retirement benefits (7%). ERE is relative to the employee's salary, FTE, and election of benefits.

#### TRAVEL

*Travel to communities on the Navajo Nation.* The 3 PCs will travel to Tuba City and to Chinle on the Navajo Nation to deliver this intervention. A mileage rate of .445 was used to calculate travel costs. Tuba City is 160 miles roundtrip from Flagstaff and Chinle is 350 miles roundtrip from Flagstaff. Funding is requested for 8 visits per student or 16 visits for each PC. A total of 16,301 miles will be traveled to deliver this intervention. Mileage for meetings with preschool staff and parents will be combined with and will be funded by the intervention visits. A meal reimbursement of \$13.00 per travel day is requested for all personnel involved in this project. Total travel costs are \$8,086.

Personnel	Erika Palm Chinle 350 miles RT X 16 visits	Maureen Russell Tuba City 160 miles RT X 16 visits	Yolanda Ramos Edgerly Tuba City 160 miles RT X 16 visits	Community Liaison Navajo Nation Various locations
In-state mileage	5600 miles	2560 miles	2560 miles	5581 miles
Mileage cost (.445)	\$2,492.	\$1,139.	\$1,139.	\$2,484.
Meal reimbursement \$13. Per day for 16 days each	\$208.	\$208.	\$208.	\$208.
Travel costs	\$2,700.	\$1,347.	\$1,347.	\$2,692.
<b>TOTAL TRAVEL</b>	<b>\$8,086.</b>			

**Total Direct Costs**

Personnel \$33,261.

Travel \$8,086.

**Total \$41,347.**

**Indirect Costs**

Indirect costs are requested at the on-campus rate of 10.0% MTDC in accordance with Northern Arizona University's approved Colleges and Universities Rate Agreement (February 7, 2013) (Cognizant Agency: U.S. Dept. of Health and Human Services). The MTDC base consists of all salaries and wages, fringe benefits, materials, supplies, services, travel and subgrants and subcontracts up to the first \$25,000. Of each subgrant or subcontract. Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, student tuition remission, rental costs of off-site facilities, scholarships, and fellowships as well as the portion of each subgrant and subcontract in excess of \$25,000.

**Total Indirect Costs**

10% of \$41,347 or **4,135.**

**TOTAL COSTS REQUESTED \$45,483.**