I am delighted to share with you a special annual report highlighting the research impacts made by and in collaboration with the Nebraska Center for Research on Children, Youth, Families and Schools over the past 15 years.

Since its inception in 2004, CYFS has grown in many ways. At the heart of the center’s growth is the community we’ve built through our relationships and partnerships in research, practice and policy.

It is a privilege to work alongside faculty, staff and students from diverse backgrounds and disciplines — in addition to the many participants, educators, administrators, policymakers, funders and others who engage with us — to impact lives through research that advances learning and development.

Together, we’re finding solutions to complex challenges facing children, youth, families, schools and communities, and especially for those who are most vulnerable.

This report provides a glimpse of the center’s growing community and the variety of life-changing research conducted through CYFS — not only in Nebraska, but across the globe.

You’ll read about researchers improving lives on a global scale by addressing critical early childhood issues in Brazil, increasing understanding of bias in STEM training, fostering productive classroom discourse through dance, changing perceptions of dental health among Latino immigrants, enhancing school readiness for young children and more.

Looking ahead, this community will continue to be a driving force as we strive to solve big problems, spark new ideas and bring people together as a hub for Nebraska’s research in the social, behavioral and educational sciences.

Thank you for your role in helping us reach this exciting 15-year milestone.

Susan M. Sheridan
Director, Nebraska Center for Research on Children, Youth, Families & Schools
George Holmes University Professor & Willa Cather Emeritus Professor of Educational Psychology
Our mission is to impact lives through research that advances learning and development.

Our vision is that all children, youth, families and schools have the opportunity to realize their potential and reach beyond.

ABOUT CYFS

CYFS was founded in 2004 as an interdisciplinary research center within the College of Education and Human Sciences at the University of Nebraska–Lincoln. CYFS receives support as a UNL Program of Excellence, and its research programs are funded through external grants and contracts.

We conduct research through grant-funded programs, provide comprehensive research support, and share research findings across audiences and platforms.

RESEARCH THEMES:

- Academic intervention and learning
- Early education and development
- Psychosocial development and social-emotional learning
- Research and evaluation methods
- Rural education and communities

The research projects featured in this report are housed in CYFS. Learn more about our research support services at cyfsgrant.unl.edu
At the Nebraska Center for Research on Children, Youth, Families and Schools, we are humbled by the number of participants, researchers, staff, scholars, schools and others who have embraced the center’s mission and contributed to our research impact over the past 15 years.

Since 2004, we’ve housed more than 200 research grants and expanded our reach across the U.S. and in seven countries. We’ve established six specialized academies, bureaus and laboratories that leverage our unique strengths and address critical research needs. We’ve continually brought new people into the fold to help solve complex challenges — while staying nimble enough to adapt to society’s changing needs.

None of this would have been possible without you — our partners in research, practice and policy — and the incredible support, expertise and participation you’ve given to the community we’ve been building since day one. A community dedicated to shaping the future. Take a closer look at some of the highlights of our journey together.

The numbers above are estimates and reflect CYFS activity through the center’s 2019 fiscal year, which ended June 30, 2019.
Something to chew on: Despite oral disease being mostly preventable, it remains one of the world's most common illnesses. For many Latino immigrant families, limited access and high cost make dental services prohibitive.

While studies demonstrate that dental appearance and aesthetics have important implications for positive self-esteem, relationships and employment outcomes, perceptions of dental aesthetics held by immigrant families have not been investigated.

A University of Nebraska–Lincoln project aims to take a bite out of the perception that good dental health is secondary to general health.

The pilot study is designed to identify risk factors, provide educational training and determine whether assessment and treatment models can be tailored for use outside of Nebraska.

Cynthia Willis-Esqueda, associate professor of ethnic studies and psychology, is the project's principal investigator. Her sister, Mary S. Willis, professor of nutrition and health sciences, is a project co-PI, along with Lorey Wheeler, CVS research associate professor, who is in charge of data analysis.

The interdisciplinary project also includes nonprofit community center partners, bilingual research translators and a public health service dentist to examine perceptions held by Latino immigrants in Lincoln on dental aesthetics, dietary composition and daily dental hygiene.

“We have a team of people from various disciplines, and we each come in with different questions to contribute something unique,” Willis said. “It's a good, mixed team, and that helps enrich the research.”

Researchers worked with David Brown, professor of oral biology at the UNMC College of Dentistry, and other dental faculty and students, to collect data from 150 adults at the El Centro de las Americas in Lincoln.

With the help of dental students and hygienists, families visited the center and completed questionnaires about diet, hygiene and their perceptions of dental care.

Data will be used to design an intervention study for both urban and rural settings to enhance dental health status and oral health literacy among immigrant families. Researchers also aim to provide immigrant communities with information to improve dietary patterns and reduce potential psychological distress that comes from poor dental health.

“Most diseases associated with dental health are preventable,” Willis said. “But you cannot arm people with information unless you know the risk factors.”

Researchers also aim to provide immigrant communities with information to improve dietary patterns and reduce potential psychological distress that comes from poor dental health.

“Because of dietary changes in the United States — such as much more sugar — Latino immigrants' dental health is impacted,” Willis-Esqueda said. “Coming here without a dental standard, along with changes in diet, can be disastrous for some.”

Each year, children die from complications from tooth infections — even in the U.S. In some cases, tooth decay can actually affect the brain.

This project is funded by a Layman Award through the UNL Office of Research and Economic Development.
As 12-year-old Joe rides a horse named Indy, his mother watches from the far end of the arena. She smiles as her son interacts with the gentle, giant animal.

Michelle Howell Smith can relate. She has seen the positive effects of equine-assisted therapy with her own daughter, MaKenna, who has autism.

Howell Smith, CYFS research assistant professor, is exploring the effects of equine-assisted activities — a broad range of ground-based and horse-mounted tasks — on children diagnosed with attention deficit/hyperactivity disorder, or ADHD.

Howell Smith noted that equine-assisted activity has been shown to significantly decrease anger, depression, post-traumatic stress disorder symptoms and social anxiety among participants, as well as significantly increase hope, well-being and coping skills. By simultaneously targeting multiple systems — sensory, muscular, skeletal, limbic, vestibular and ocular — equine-assisted therapy fosters physical, psychological, social and educational benefits, both at the riding arena and away from it.

Her pilot project includes youth in middle school with ADHD. Study participants were recruited in late March, and the six riding sessions began in April at the Horses for Healing center.

At the beginning of the six-week program, participants’ levels of cortisol and alpha-amylase — stress hormones secreted through saliva — are examined. Additionally, functional MRI scans are taken of the brain to learn whether neural connections during a resting state fluctuate from baseline to post-program.

During riding sessions, participants wear heart rate monitors to record heart rate variability to measure overall health and stress response. Data are gathered to document how those patterns change over time, including general variations and in-the-moment changes while riding.

The relaxation that comes from the interaction, Howell Smith said, is mutual between the children and the horse.

"The horse is calm, and when you are grooming, riding and petting the horse, they help you slow down, too," she said.

Along with the riding component, participants also do ground-based work, such as grooming the horse, learning how to put the tack on the animal and leading it through a simple obstacle course.

At the end of the six weeks, follow-up surveys and interviews are conducted.

Howell Smith’s motivation for the project stemmed from both her professional and personal life. She recently completed a separate project that included equine-assisted psychotherapy with participants at St. Monica’s Behavioral Health Services, a Lincoln addiction recovery center. On a more personal level, her daughter has autism and an intellectual disability.

Before her daughter began riding, her play around other children was amid them, but “in her own world,” Howell Smith said. A few months after she started riding, however, she began to interact with friends.

“When you experience a truly dramatic change in your child’s behavior, it sparks ideas,” she said.

The pilot project is funded by a University of Nebraska Core Facility grant.
Although kindergarten is widely recognized as the beginning of a child’s formal academic journey, preparation for that journey is crucial. Research shows that solid early childhood experiences provide substantial benefits for children’s success.

High-quality, early mathematical instruction is particularly important. Children’s early mathematical knowledge also predicts reading achievement even beyond kindergarten.

However, persistent teacher turnover in early childhood settings can negatively impact children’s learning opportunities. When teachers with strong math expertise leave a school or learning center, their content knowledge and instructional practices go with them.

To help overcome such challenges, Nebraska researchers Kelley Buchheister, Holly Hatton-Bowers and Rachel Schachter — assistant professors of child, youth and family studies — have designed an innovative professional learning model to enhance teachers’ mathematical knowledge and practice.

Because directors and coaches are more likely to remain in their positions, Buchheister said, preparing them as leaders is essential to retaining their knowledge and skills in a school or program.

The “Coach Approach” project focuses on building early childhood leaders’ capacity to support teachers’ practices and build effective strategies to promote children’s mathematical learning. The professional learning experience for on-site coaches includes workshops, regular planning meetings and follow-up sessions, and a content video series design to expand their mathematical content knowledge.

“Teachers in preschool and early childhood settings need to understand and think about mathematics, and about how they approach mathematics — not just in instructional activities, but also informal activities and settings, during play and time outside class,” said Buchheister, the project’s principal investigator.

Program participants include leaders and teachers from Omaha’s Indian Hill Elementary Educare program, a research-based organization that provides education and support to financially disadvantaged families and their children.

The coaching strategies are rooted in a growth mindset model, then aligned to the teachers’ and children’s needs in specific classrooms. When learners believe they can become better at something — such as math — they understand their actions can lead to higher achievement.

As coaches participate in the professional learning experience, data are gathered from coaching sessions, classroom instruction and surveys. These data help identify opportunities to expand teachers’ knowledge and instructional practices.

“We want to better understand the leaders’ role and get any suggestions they might have on how to best approach teachers,” Buchheister said. “Together, we have a broad goal, but there are many milestones to acknowledge along the way.”

The research team believes the “Coach Approach” can develop early childhood teachers’ practices in other content areas.

“This is a very specific coaching context, so we want to be sure this model can be used in other contexts, such as literacy,” Schachter said.

This pilot project was funded by a Layman Award through the UNL Office of Research and Economic Development.
Identifying, controlling selection bias

As demand increases for employees with expertise in science, technology, engineering and mathematics, representation of Latinos in STEM fields continues to lag.

As of 2011, Latinos represented only 7 percent of the American STEM workforce, despite accounting for more than 16 percent of the U.S. population.

Natalie Koziol, CYFS research assistant professor, and Marc Goodrich, assistant professor of special education and communication disorders, are exploring how to test for differential item functioning — the extent to which items differentially discriminate among different groups — and how to better control for such bias.

Their goal is to learn whether Spanish-translated math items function differently for Spanish-speaking kindergartners after accounting for potential selection bias.

Their design is an evaluation that draws on a pre-test measure to assign individuals to treatment groups. In this case, an English language screener was used to determine whether students should receive an English or Spanish-translated math test.

Their design makes it possible to estimate causal effects in environments where randomization is impractical.

Following the empirical application, Koziol and Goodrich will conduct a simulation that involves generating data for a hypothetical known population, then evaluating how well the newly proposed and traditional approaches correctly identify the DIF items. They will then be able to determine which approach is most effective.

The challenge, Koziol said, is to ensure the English and Spanish items measure the same construct.

“If we have two students with the same math ability, with one student taking a test in English and the other taking the Spanish version, they should have the same probability of answering correctly,” she said. “If they don’t, that’s indicative of differential item functioning — the items don’t function the same in both languages.”

Once differently functioning items are identified, adjustments can be made. For example, English-to-Spanish translations of math word problems or instructions can be modified, or avoided altogether.

“You don’t want students’ math proficiency to be confounded by a language barrier,” Koziol said. “We need to be able to measure the achievement and skills of all students, not just those who speak English proficiently.”

The researchers are examining a restricted-use dataset from the “Early Childhood Longitudinal Study, Kindergarten Class of 1998-99.” Their focus is kindergartners’ mathematics achievement, where previous research found Latino students have significantly lower performance than their white peers in both fourth and eighth grade. The gap is even wider for students identified as English language learners.

Koziol and Goodrich are working to operationalize a new approach for investigating DIF. Once it is ready, they will apply the approach to evaluate DIF of English vs. Spanish-translated kindergarten math items within a subsample of Spanish-speaking students.

Improving outcomes for rural adolescents

Henry Bass, a fifth-year doctoral student in school psychology, has a passion for helping youth navigate one of life’s most challenging periods: adolescence.

Through his dissertation project funded by the Society for the Study of School Psychology, Bass is examining how to identify the extent to which family-school partnerships improve long-term outcomes for children as they become adolescents.

The research goal is to learn whether there are lasting positive outcomes into adolescence — for example, reduced risk for depression, violence, truancy and drug use — when parents and teachers of at-risk students work as partners in elementary school to address behavioral challenges.

Bass’ study measures the long-term effectiveness of Conjoint Behavioral Consultation, an evidence-based intervention that promotes parent and teacher partnerships and joint problem-solving to address student needs at home and school. Across decades of research, CBC has consistently shown immediate improvements on child behavioral and social-emotional skills. Bass is examining outcomes across time for a sample of rural students, most of whom are in middle school and high school, who previously received CBC services in elementary school.

“Behavioral and social-emotional concerns tend to increase in severity over time and become more difficult to address,” Bass said. “If we can show that the effects of an early intervention can potentially lessen concerns during adolescence, then we can make a case that the intervention has a positive impact on child developmental trajectories — and long-term prognosis.”

The project is gathering data from 32 rural counties across three Midwest states.

“I believe it will be another step forward in ensuring that the strategies we use to address child and family needs also set a course for future success,” he said. “Interventions need to be held to a higher standard and show long-term benefits if we want to demonstrate that we are providing a real, meaningful impact on the lives of children and their families.”

Bass’ doctoral advisor is Susan Sheridan, CYFS director. The project is funded by a grant from the Society for the Study of School Psychology.
Nebraska-Brazil early childhood partnership continues to thrive

While there are distinct differences between the U.S. and Brazil, there are even more things that the two countries have in common. Chief among them is a desire to ensure that all children have the opportunity to reach their fullest potential.

The Nebraska-Brazil Early Childhood Partnership grew from this shared vision. Today, cross-country relationships thrive.

For the past three years, the global initiative has brought together interdisciplinary researchers from Nebraska and Brazil to find solutions to complex early childhood challenges.

The partnership, supported by the University of Nebraska-Lincoln and the Maria Cecilia Souto Vidigal Foundation, began in 2016 with three pilot impact projects co-led by Nebraska’s Natalie Williams, Soo-Young Hong and Natalie Koziol, along with their Brazilian colleagues.

Hong partnered with Gisela Wajakop, professor at Pontifical Catholic University of São Paulo, to strengthen preschool science education by promoting teachers’ reflective practice. Koziol worked with Denise Ruschel Bandeira, professor at Federal University of Rio Grande do Sul, to test and refine a screening tool to identify developmental delays in young children across Brazil. Williams collaborated with Pompeia Villachan-Lyra, professor at Federal University of Pernambuco, to understand the needs of caregivers whose children were born with microcephaly and other developmental problems as a result of the Zika virus.

“These initial projects generated remarkable results that would not have been possible without this global partnership,” said Susan Sheridan, director of CYFS, which helped to strengthen preschool science education by promoting teachers’ reflective practice. Koziol worked with Denise Ruschel Bandeira, professor at Federal University of Rio Grande do Sul, to test and refine a screening tool to identify developmental delays in young children across Brazil. Williams collaborated with Pompeia Villachan-Lyra, professor at Federal University of Pernambuco, to understand the needs of caregivers whose children were born with microcephaly and other developmental problems as a result of the Zika virus.

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“Conducting joint research has helped us uncover ways to empower teachers in both countries to talk more about science — and to help young children think more like scientists,” Hong said.

“The pilot work has created a bridge for future opportunities to share ideas, train future leaders in the field and co-develop solutions that will improve outcomes for children and families in both countries,” Sheridan said. “This is just the beginning.”

To learn more about the partnership, visit cyfs.unl.edu/brazil.

Along with Hong and Williams, child, youth and family studies; and Koziol and Sheridan, CYFS; the Nebraska research team includes Cody Hollist and Holly Hetten-Bowers, CYFS; Renata Gomes, CYFS; and Christine Marvin, emeritus professor, special education and communication disorders.

From left: Susan Sheridan, Cody Hollist, Inabela Tavares and her daughter Graziella Vitória, Natalie Williams, Pompeia Villachan-Lyra, Emmanuelle Chaves, Germany Gracy Maia and her daughter Giovanna, in Recife.

Steps taken at the SESC Boa Vista in São Paulo, one of the preschools engaged in PreSTAR.

Exploring the garden at EMBI Ignasiow in Recife, and at the preschools engaged in PreSTAR.
Family mealtimes essential to lifelong health

For centuries, families have served up good conversation around the dinner table. Sharing advice, planning events and recounting the day’s highs and lows are key mealtime ingredients to connecting families and building support systems—all while cooking up valuable learning opportunities for the youngest family members.

Dipti Dev, associate professor of child, youth and family studies and a Nebraska Extension child health behavior specialist, is working to strengthen those family bonds. Her research plate is full with multiple, connected projects aimed at reinforcing childhood nutrition and obesity prevention, particularly through children’s mealtime interactions with parents and child care providers.

“Family meals are a time for children and adults to connect,” Dev said. “We have good conversations and build relationships over meals by sharing our thoughts and engaging with one another. Mealtimes can be very powerful.”

At the core of Dev’s research is Go NAP SACC, a program designed to enhance young children’s health through better nutrition and physical activity in early care and education programs. It is the next generation of Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC), an evidence-based program designed to improve child care policies, practices and environments for obesity prevention.

To enhance Go NAP SACC’s effectiveness, Dev collaborated with Nebraska’s Go NAP SACC team to develop a user-friendly online tool that can be tailored to each individual program. The website houses data and simplifies analysis and reporting, which helps inform policymakers, researchers, Extension professionals and child care practitioners to improve child care quality.

The website enables child care providers to complete online pre- and post-intervention assessments, and generate individualized reports to help develop action plans. For example, if children’s screen time needs to be reduced, providers can work with trainers to identify best practices to achieve that goal.

In 2018, 280 Nebraska early childhood education professionals participated in Go NAP SACC at 111 homes and child care centers, impacting about 4,000 children.

According to provider assessments, participating child care programs have significantly improved a range of nutritional and screen-time habits among children, and have generated more physical activity.

Dev’s healthy eating program — Ecological Approach To Family Style Dining (EAT-Family Style) — focuses on fostering pleasant mealtime environments. Participating child care providers eat meals with the children, who select and serve their own portions.

Children who participated in the EAT-Family Style pilot ate more fruits, vegetables and healthy grains. Teachers reported that children were more engaged during meals, and have expanded their vocabularies through mealtime conversations.

Technology is integral to reach rural providers, whose curriculum includes online training modules with short videos, goal-setting and distance coaching.

Participating teachers and child care providers receive Chromebooks to complete modules and surveys, and to video conference with their coaches, who are Extension educators.

Dev is also working with the College of Engineering, the Raikes School of Computer Science and Stanford University to develop the NU-SensiTray, which measures a child’s food intake and calculates nutritional values of food they consume. The data are then relayed to a website and smartphone application for use by researchers and parents.

“Integrating this technology can make the wisdom and support shared at the dinner table even more powerful,” Dev said.

The grant is funded by the Nebraska Department of Health and Human Services through a sub-award from U.S. DHHS.

Healthy eating habits developed at an early age can last a lifetime.
Promoting cultural understanding through the dialogue of dance

While constantly evolving technology such as the internet, smartphones and social media have connected the world like never before, various polls and surveys reveal that many people feel more isolated than ever. In many ways, society has become polarized. For educators, the growing challenge is to find effective ways to ensure their schools are places where all students’ voices are heard and welcomed.

A CYFS research project aims to teach students to listen to one another productively — and to train teachers how to foster cultural understanding in their classrooms.

Theresa Catalano, associate professor of teaching, learning and teacher education,

The project is funded by a Humanities Nebraska grant. Along with Catalano, the project’s principal investigator, the research team includes Jenelle Reeves and Stephanie Wessels, associate professors of TLTE; and Alison Leonard, associate professor of arts and creativity at Clemson University. The Sheldon Museum of Art’s Walter Mason, Carrie Morgan and Jessica Rosenthal also were integral to the project.

Project participants included pre-service secondary education teachers enrolled in Catalano’s “Teaching Multilingual Learners in the Content Area Classrooms,” a course designed to prepare teachers to work with students with immigrant backgrounds and equip educators with tools that encourage healthy discussion.

Catalano’s project coincides with a Sheldon Museum of Art exhibit, “Unquiet Harmony: The Subject of Displacement.” The exhibit features works from international artists that examine individual and global perspectives of immigration and migration.

Community partners from Yazda, a Lincoln nonprofit cultural center whose mission is to assist Yazidis in recovering from the 2014 genocide and prevent future atrocities, shared firsthand accounts of their refugee experiences with the students.

The participating Yazidi immigrants live in Lincoln, which is home to North America’s largest Yazidi immigrant community — more than 3,000 refugees who fled religious and ethnic persecution in Iraq.

Together, they created interpretive dances to bring those stories to life and performed them for one another.

The project focused on experiencing the Sheldon exhibit; collaborating on the dance workshop; and describing how their viewpoints had changed as a result of the experience.

The project’s most dynamic feature is the dance workshop. The challenge for participants is to figure out how to tell a story through dance.

“When you put people together and have them listen to one another’s perspectives, and then add dance to the mix, it adds physical intimacy and vulnerability that can level the field and help create a sense of community,” Catalano said.

In addition to providing Yazidi community members an opportunity to tell their stories and interact with Nebraska students, the project focuses on supporting teachers to develop the knowledge, skills, attitudes and dispositions to effectively implement and encourage civil discourse in their future classrooms.

“We are building and strengthening the community through these projects, and we care deeply about preparing future teachers to work with refugee and immigrant populations,” Catalano said. “But we also want people to understand the incredible value of arts-based education.”

Participants perform during the dance workshop.

Theresa Catalano, principal investigator

We care deeply about preparing future teachers to work with refugee and immigrant populations.
Getting Ready to expand early childhood reach

For the past 15 years, the Getting Ready research program has helped enhance school readiness for children age 5 and younger by bringing evidence-based parent engagement strategies to early childhood programs throughout Nebraska.

Thanks to additional, recent funding from the U.S. Department of Health and Human Services’ Preschool Development Grant, Nebraska researchers will move those strategies into practice.

Lisa Knoche, CYFS research associate professor and principal investigator of the Getting Ready Preschool Development Grant, said the recent funding is an opportunity to expand the program’s reach.

“The grant not only allows us to strengthen Getting Ready training, but we’re also building a coaching infrastructure to enable more programs to utilize the intervention,” Knoche said. “We have the ability to impact the work professionals do with families to ultimately improve outcomes for children and families. The outcomes — and the impact it can have — is the primary goal.”

Through the Preschool Development Grant, training is underway for 75 professionals working in Head Start, Early Head Start and Maternal, Infant and Early Childhood Home Visiting (MIECHV) programs. Five Getting Ready coaches are training the new early childhood professionals.

After completing their initial training, each professional participates in sessions with a coach who collaborates with the professional on ways to enhance their interactions with families using the Getting Ready approach.

Also, new video training modules are being developed for use with early childhood professionals who cannot attend in-person training. The modules will mirror similar modules created as part of Getting Ready’s previous work with the Nebraska Department of Education.

Refining the intervention package for use in real-world early childhood settings is key during this phase of Getting Ready, Knoche said.

Since its 2004 launch, Getting Ready has focused on strengthening relationships in children’s lives, including relationships among parents, their young children and the early childhood professionals connected to the family.

Developed at the University of Nebraska–Lincoln, the Getting Ready approach features interaction among families and early childhood professionals that occur during home visits, conferences, informal conversations, messages and more.

“Getting Ready builds on culturally relevant family and child strengths, and is appropriate for all early childhood programs, including home- and center-based settings,” said Susan Sheridan, developer of Getting Ready.

The research team recently published findings from a randomized trial of Getting Ready that focused on supporting preschool children with developmental concerns. They found that participating children experienced more improved social skills and relationships with their early childhood educators than their peers in a comparison group, and relationships between participating children’s parents and early childhood educators also outpaced non-participants.

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Many children growing up with disadvantages enter school without the requisite social, emotional and behavioral skills to be successful. When those children start off behind, they have a difficult time catching up.

Because a child’s early school experiences are predictive of long-term educational trajectory, starting school socially and behaviorally ready is crucial. Otherwise, long-term detrimental outcomes and widening gaps in academic and social skills may follow.

Rachel Schumacher, fifth-year doctoral student in school psychology, is examining children’s transition into school, and how children respond to that transition. Through her dissertation project, funded by the Society for the Study of School Psychology, she is exploring how the relationships between parents and children — and parents and teachers — change over time, and how those changes are linked to changes in children’s social-emotional skills.

Schumacher aims to find ways to close the achievement gap for young children at risk due to disadvantaged socioeconomic conditions by ensuring positive transitions to elementary school. She also will investigate whether community setting, such as urban or rural, affects children’s school readiness.

“We know the transition into school is very important, but we also know many kids struggle with that transition,” Schumacher said. “The ultimate goal is to identify factors that close the school readiness gap.”

Her project uses a subset of data gathered through Learning Frontiers — funded by the Institute of Education Sciences — that focuses on factors that promote early learning and development in children as they develop from preschool to the third grade. The subset samples 334 children who were followed from preschool through the first grade, and their parents and teachers.

Schumacher notes that young children who develop good social-emotional skills — for example, sitting still, paying attention, following directions — tend to have better outcomes in school.

“Parents are children’s first and most significant role models, so the skills they develop during their preschool years are a prerequisite to strong skills once they start school,” she said. “If they develop better social and emotional skills at home, they’ll start off with better relationships and more success at school.”

The grant is funded by the Society for the Study of School Psychology. Schumacher’s doctoral advisor is Susan Sheridan, CYFS director.

AMANDA WITTE
Research Assistant Professor, CYFS

“Pursuing Causal Inferences with Complex Survey Data”

Secondary analysis of large federally funded studies has garnered national and institutional attention. These studies afford strong evidence of external validity, as the samples are typically nationally representative. Unfortunately, because the studies are not randomized experiments, they lack evidence of internal validity. As a result, estimates of treatment effects may be confounded by selection bias — pre-existing differences between groups.

Methods developed to control selection bias have not been adequately tested for use with the complex sampling designs used in federal studies. Hybrid approaches that adjust for such complexities can generate inaccurate results in some contexts, so methodological studies are needed to develop and identify appropriate statistical approaches.

Koziol’s research aims to advance statistical methodology for controlling selection bias in analyses of complex survey studies. The study tests the statistical validity of a novel method for controlling selection bias in complex designs, i.e., sample weighted multilevel propensity score analysis, by conducting a secondary analysis of the Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 and a Monte Carlo simulation. The project contributes substantively and methodologically to the social sciences by providing analytic guidance to applied researchers, and introducing advanced statistical theory underlying propensity score analysis and complex designs.

NATALIE KOZIOL
Research Assistant Professor, CYFS

“The Efficacy of Technology-Delivered Mental Health Services in Rural Nebraska”

Rural America affords children notable opportunities for positive lifetime trajectories. However, children’s behavioral problems are distinct in rural America where, relative to their urban counterparts, children are more likely to have a mental health problem and demonstrate significant difficulties. Because mental health services are sparse in rural communities, schools are often called upon to provide support to students and families.

But those schools tend to lack the necessary infrastructure, such as specialized staff, to effectively meet student needs.

Witte’s research aims to address rural children’s behavioral and mental health needs through Teachers and Parents as Partners (TAPP), an evidence-based, family-school program designed to establish parent-teacher relationships to help ensure children’s academic success. Because TAPP often is not feasible in rural communities, where access to highly trained specialists is limited or non-existent, distance technology offers potential as a new method of delivering TAPP that bypasses many of the barriers facing rural communities.

This study explores the potential efficacy, feasibility and acceptability of TAPP delivered via distance technology — “tele-TAPP” — for rural students struggling with significant behavioral problems. The technology-mediated, school-based program aims to create effective family-school partnerships that emphasize rural communities’ strengths, increase access to mental health services and have the potential to alleviate rural student behavioral problems. Data collected in this project will be used to expand research into large-scale educational interventions.

AMANDA WITTE
Research Assistant Professor, CYFS
**LANDSCAPE OF SUPPORT**

**Snapshot of Cumulative CYFS Grant Activity**

Support for the Nebraska Center for Research on Children, Youth, Families and Schools is generated primarily through external grants. The graphic below highlights grant activity since the center’s inception in 2004.

**Internal grants funded**

$998,075

**External grants funded**

$87,071,222

**Sources of Funding**

The chart shows the cumulative dollar amounts and proportions of funding that CYFS researchers have garnered from federal, state, foundation and internal (i.e., University of Nebraska) sources.

- Federal (94 grants)
- State (39 grants)
- Foundation (63 grants)
- Internal (47 grants)

Percentages rounded to nearest 1%

**Cumulative External Grant Dollars and Program of Excellence Support**

The line graph below depicts the center’s cumulative external funding (i.e., federal, state and foundation) relative to Program of Excellence support from the University of Nebraska.
**ACTIVE GRANTS & CONTRACTS**

The following grants and contracts received new or ongoing funding during 2018-19.

**Federal Awards ($25,450,616)** Administration for Children and Families Getting Ready 0-3 (G303): Supporting the Development of Infants/Toddlers Through an Integrated Parent–Teacher Relationship–Based Approach PIs: Lisa Knoche, Susan Sheridan Getting Ready Prechool Development Grant PDG (subaward through Nebraska Children and Families Foundation) PF: Lisa Knoche Go NAP SAC: Online Tool and Evaluation (subaward through the Nebraska Department of Health & Human Services) PF: Dipti Dev Thresholds II PIs: Greg Welch, Julio Torqueland, Helen Raikes Centers for Disease Control & Prevention Evaluating Practice-Based Sexual Violence Primary Prevention Approaches from CDC’s From Prevention PIs: Katie M. Edwards Environmental Protection Agency Evidence-Based Interactions Between Indoor Environmental Factors and Their Effects on K-12 Student Achievement and Well-Being PIs: Lily Wang, James Bovaird, Josephine Lau, Clarence Waters National Aeronautics & Space Administration BlueYES-NASA Space Grant: Wear Tech (subaward through UNO) PF: Gwen Nugent National Institutes of Health Development and Pilot Trial of an Intervention to Reduce Disclosure Interventions’ Negative Social Reactions and Victims’ Psychological Distress and Problem Drinking PIs: K. M. Edwards Estimating Mediation Effects in Prevention Studies (subaward through Arizona State University) PF: Matt Fritz HOME C2OOKING: Creative Culinary Opportunities Offering Kids Inquiry-Based Nutritional Genius (subaward through the University of South Carolina) PF: Kelley Bucheleister

**National Science Foundation**

- Analysis of Effective Science Coaching: What, Why and How PIs: Gwen Nugent, James Houston
- Equity in Engineering: Understanding and Promoting All Elementary School Children’s Knowledge of and Motivation to Engage in Engineering (subaward through Arizona State University) PF: Lorey Wheeler
- Maker Fridays: Engaging Rural and Under-Represented High School Students in Pre-Engineering Design and Creativity (subaward through Northeast Community College) PF: Michelle Howell Smih

**Nebraska STEM:**

- Supporting Elementary School Teacher Leadership PIs: Amanda Thomas, Guy Traimn, Wendy Smith
- Nebraska Wearable Technologies PIs: Bradley Barker, Gwen Nugent, Jennifer Mellander Keshwani, Carl Nelson, Neal Grandgenett

**State Awards ($1,115,514)**

- Nebraska Department of Education
  - 21st CCCLC Observation Rubric Development (subaward through UNMC) PF: Dipti Dev
  - Evaluation Improvement in Schools that Received SIG Funding (2018) PIs: Leslie Hawley, Shavonna Holman
  - Getting Ready – Part C NDE PF: Lisa Knoche
  - NDE Home Visit Study (subaward through UNMC) PF: Lisa Knoche
  - Nebraska Multi-Tiered System of Support Implementation Support Team PF: Amanda Witte

**Nationalities of Health**


**Foundation/Other Awards ($2,964,013)**

- H-4 Common Measures Funding Source: National H-4 Council PF: Michelle Howell Smith

**Active Grants & Contracts**

- Culturally Responsive Practices PF: Susan Sheridan
- Early Learning Network Lead PF: Michelle Howell Smith
- Efficacy of the START-Play Program for Infants with Neuromotor Disorders (subaward through Duquesne University) PF: James Bovaird
- Learning Frontiers: Pre-K to Grade 3 PIs: Susan Sheridan, Lisa Knoche, James Bovaird, Theona Irka
- School Psychology Specialization in Cognition/Neurology (subaward through UNMC) PF: Sonya Bhatta, Susan Sheridan
- Common Measures e-Learning Funding Source: National H-4 Council PF: Seth Teager
- Dental Wars: Arming Immigrants with the Tools to Combat Poor Dental Health & Stigma Funding Source: UNL Layman Award PF: Cynthia Willis-Espeda
- Developing a Model for Quality of Life: Identifying Domains and Determinants for Rural Ethnic Minorities Funding Source: UNL Rural Futures Institute PF: Maria Rosario de Guzman, Rodrigo Cantarero, Soo-Young Hong, Yan Xia
- Development and Preliminary Test of the Empowering Network to Eliminate Team Stigma (E-NETS) Intervention Funding Source: UNL Layman Award PF: Elliot Tible
- Development and Validation of the Inventário Dimensional de Avaliação do Desenvolvimento Infantil (2DIM, Dimensional Inventory for Child Development Assessment) Funding Source: UNL-Brasil Collaboration Pilot Impact Grant PF: Natalie Knozel (UNL), Denise Ruschel Bandeira (Brasil)
- Early Childhood Plan Evaluation Funding Source: W.K. Kellogg Foundation PF: Dawn Davis, Lisa Knoche, Helen Raikes
- Early Steps to School Success Funding Source: Save the Children Foundation PF: Helen Raikes
- Enhancing Students with Math Difficulties’ Transition from Arithmetic to Algebra Funding Source: UNL Layman Award PF: Min Namkung
- Examining Elementary Teachers’ Enactment of Digital Instructional Materials for Mathematics Funding Source: UNL Layman Award PF: Amanda Thomas
- Math Early On II Funding Source: Buffett Early Childhood Fund PF: Ruth Fleaton, Victoria Mollese, Jennifer Looper-Miller
- Mindfulness and Mastery Funding Source: Buffett Early Childhood Institute PF: Sonya Bhatta, Susan Sheridan
- Needs and Adaptation of Caregivers of Young Children with Congenital Zika Virus Syndrome in Northeast Brazil: A Mixed Methods Pilot Study Funding Source: UNL-Brazil Collaboration Pilot Impact Grant PF: Natalie Williams (UNL), Pompeia Villachan-Lyra (Brazil)
- Neighborhood Socioeconomic Disadvantage and Child Development Trajectory: Longitudinal Approaches Using National Surveys and Census Datasets Funding Source: UNL Research Council PF: Jeong-Ryun Choi
- Preschool Science Talk in Action and Reflection (Pre-STAR) Funding Source: UNL-Brazil Collaboration Pilot Impact Grant PF: Soo-Young Hong (UNL), Gisela Wijayanto (Brasil)
- Pursuing Causal Inferences with Complex Survey Data Funding Source: UNL Layman Award PF: Natalie Knozel
- Ready Rose Funding Source: Buffett Early Childhood Fund PF: Helen Raikes
- Starting School Socially and Behaviorally Ready: The Impact of Malleable Home-Based Relationships and Community Setting Funding Source: Society for the Study of School Psychology PF: Rachel Schumacher, Susan Sheridan
- STEM Pathways in the Community College: An Examination of How Community Colleges Broader or Restrict Institutional Capacity for the STEM Transfer Function Funding Source: UNL Layman Award PF: Elvira Abrica

- Strengthening Nebraska’s Communities and Cultivating Better Teachers through Arts-Based Education Funding Source: Humanities Nebraska PF: Theresa Catalano
- Supporting Early Childhood Development in Africa: Capacity-Building Partnership Funding Source: Children’s Investment Fund Foundation (subaward through UNMC) PF: Natalie Knozel
- Take Flight Farm/S. Monica’s Equine Assisted Therapy Funding Source: Take Flight Farms PF: Michelle Howell Smith
- Teachers and Parents as Partners-Vertical (TAPP-V): Supporting Students with ABDHD Across Grade-Level Transitions Funding Source: UNL Layman Award PF: Matthew Gormley
- The Effectiveness of Concurrent Behavioral Consultation on Student Outcomes in Rural Communities: A Follow-Up Study Funding Source: Society for the Study of School Psychology PF: Henry Bass, Susan Sheridan
- The Efficiency of Technology-Delivered Mental Health Services in Rural Nebraska: Addressing the Needs of Students, Families and Schools Funding Source: UNL Layman Award PF: Amanda Witte
- The Roles of Community Health Workers in Addressing Adolescent Maternal Mental Health in a Kenyan Refugee Camp Funding Source: UNL Layman Award PF: David Tippens
- Train the Coach Approach: Sustaining High-Quality Mathematical Learning in Early Childhood Settings Funding Source: UNL Layman Award PF: Kelley Bucheleister
- Understanding Early Adolescents Coping with Peer Threat: Insecurity as a Risk Factor for Psychopathology Funding Source: UNL Layman Award PF: Alida Tippens
- Using Self-Regulation to Predict Preschoolers’ Disruptive Behavior Disorders Funding Source: Society for the Study of School Psychology PF: Andrew White, Susan Sheridan
AFFILIATES & PERSONNEL

CYFS Research Affiliates
Research affiliates make up a network of more than 90 diverse faculty from across the University of Nebraska system who make significant contributions to Nebraska’s interdisciplinary research community in the social, behavioral and educational sciences. Research affiliates are actively engaged with CYFS and are integral to our mission. Through their formal connection to the center, they also have opportunities to engage in valuable research exchanges, professional development, technical assistance and networking events, along with communications support to make their CYFS-housed work highly visible and accessible.

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Nebraska Early Childhood Initiative
National Science Foundation (CAREER

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