

Federal Research Investment from NSF: **NEBRASKA**

About NSF

As the federal agency charged with the advancement of scientific progress across all of the fields of science and engineering, the National Science Foundation (NSF) is the cornerstone of America's basic scientific research enterprise. NSF's seven directorates fund research in diverse disciplines as well as interdisciplinary, cross-cutting initiatives. Support for education research comes primarily from the Education and Human Resources Directorate and also from the Social, Behavioral and Economic Sciences Directorate.

Examples of NSF-funded Education Research in Nebraska

- **Strategic Problem-based Approach to Rouse Computer Science (SPARCS):** Researchers at the University of Nebraska at Omaha are examining SPARCS, which is supporting 72 teachers of grades 7-9 to integrate computer science into their science and math instruction. This project will help teachers integrate computational thinking and computer science principles into their teaching through these tools, by engaging students in projects that analyze data. The efforts of these teachers will be documented through several forms of data, including elaborate teacher portfolios, observations, interviews, and student achievement results. These data will support refinement of SPARCS from year 1 to year 3, and will be designed to communicate to other educators how to implement similar efforts in other schools.
- **Strategies: Action at a Distance:** University of Nebraska researchers – in consort with Nebraska's 18 Educational Service Units – are utilizing distance education and communication technologies to provide university outreach opportunities to students and teachers through science research to high schools in Nebraska. The chief aim of the project is to serve the needs of students and teachers in the most remote rural areas of the state of Nebraska through participation in a cosmic ray observatory experiment where students build, operate, maintain, and utilize cosmic ray detectors in schools across the state to foster increased interest and learning in physics and astronomy. The overall program goal is the development and implementation of a model strategy that encourages rural teachers' and students' active participation in STEM research in grades 10-12 both in class and through extracurricular/afterschool activities.



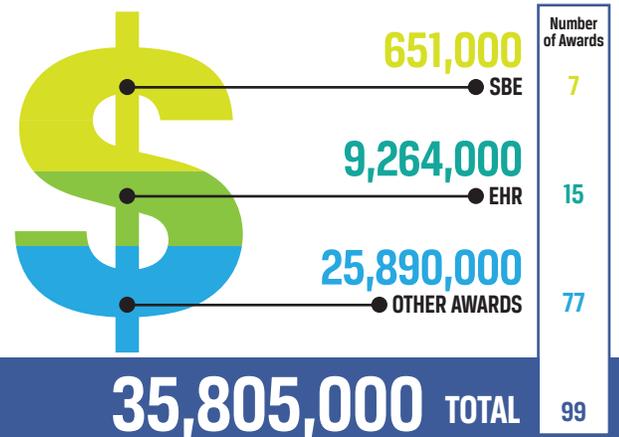
Top 5 NSF-funded Universities in Nebraska

1. University of Nebraska-Lincoln (\$29,774,000)
2. University of Nebraska at Omaha (\$2,906,000)
3. Metropolitan Community College (\$823,000)
4. College of Saint Mary (\$581,000)
5. University of Nebraska Medical Center (\$459,000)

NSF in Nebraska

- Nebraska received 99 awards in FY 2014.
- Nebraska ranks 37th overall in NSF funding.
- Nebraska received over .5% of the total NSF award budget in 2014.

Nebraska Funding



Federal Research Investment from IES: **NEBRASKA**

About IES

The Institute of Education Sciences (IES) is the federal research agency within the U.S. Department of Education that builds knowledge and informs understanding of education from early childhood through postsecondary to adult workforce.

Research, statistics, and evaluations funded by IES provide policymakers and practitioners with reliable information on the condition and progress of education, educational practices that support learning and improve academic achievement, and the effectiveness of education programs.

IES Resources for Schools and Educators in Nebraska

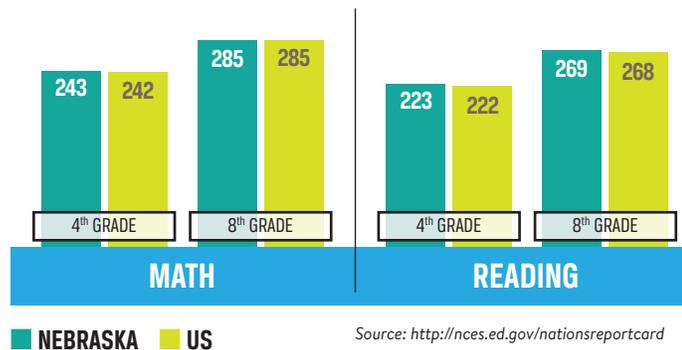
- The Nebraska Statewide Longitudinal Data System (N-SLDS) has received two grants from IES to build and expand the data capabilities of the SLDS. The Nebraska Department of Education (NDE) is using its most recent grant in 2012 for the development and implementation of a data analysis tool for districts that uses multiple local and state data sources to produce reports for local decision-makers, providing a statewide system of professional development training for data analysis to reach every district, building a research and evaluation operation in NDE, and expanding and enhancing the N-SLDS for sustainability.
- The National Center for Research in Rural Education (R2ED) at the University of Nebraska-Lincoln received IES funding to undertake a research agenda that identifies and validates elements of a practically-relevant, research-based framework for teacher professional development, including mechanisms of delivery (e.g., technology-based distance delivery), in the rural context. In 2015, researchers from R2ED published a paper with the goal of informing the definition of “rural” in education contexts.
- The Central Regional Educational Laboratory serves the applied education research needs of Nebraska, among other states. The Nebraska Department of Education is a member of the Mathematics and Science Research Alliance (MSRA), which is providing guidance and insight into important issues affecting STEM disciplines, such as curriculum, instructional materials, assessments, and teacher evaluation. One major project of the MSRA is the examination of factors associated with implementation of secondary mathematics pathways.

Average Spending Per Student on Education



Source: National Center for Education Statistics, Common Core of Data (CCD), 'School District Finance Survey (F-33)'

Nebraska Performance on the National Assessment of Educational Progress



Source: <http://nces.ed.gov/nationsreportcard>

IES Online Resources

- What Works Clearinghouse:
<http://ies.ed.gov/ncee/wwc/findwhatworks.aspx>
- Education Resources Information Center:
<http://eric.ed.gov>