CSI is a research study conducted by the National Center for Research on Rural Education (R/2). The study focuses on professional development for science teachers in rural schools. The project is funded for two years by the U.S. Department of Education and involves approximately 160 teachers over two years. The project consists of both experimental and control groups, with Year 1’s control group having first option for Year 2’s experimental group. The study is designed to evaluate the impact of professional development on guided scientific inquiry with follow-up coaching on teacher inquiry knowledge, skills, self-efficacy and beliefs, and student inquiry knowledge, skills, engagement and science attitudes.

**THE RESEARCH QUESTION**

What is the impact of professional development on guided scientific inquiry with follow-up coaching (treatment) vs. no professional development (control) on (a) teacher inquiry knowledge, skills, self-efficacy and beliefs, and (b) student inquiry knowledge, skills, engagement and science attitudes?

**THE PROJECT SUMMARY**

CSI is a research study conducted by the National Center for Research on Rural Education (R/2) at the University of Nebraska-Lincoln.

- Funded for two years by the U.S. Department of Education
- Involves approximately 160 teachers over two years
- Consists of both experimental and control groups
- Year 1 control group has first option for year 2 experimental group

**CSI PROFESSIONAL DEVELOPMENT TARGETS:**

- Nebraska State Standards for science inquiry
- Science Inquiry instructional strategies
- Supports for classroom implementation
- Student engagement in science inquiry

**CSI PROFESSIONAL DEVELOPMENT LOGISTICS (2013-2014):**

- Money for instructional materials
- Travel expenses related to summer institutes
- Stipend for participation in the study (both control and experimental groups)
- CSI teachers collectively traveled more than 35,000 miles for the 2012 summer institute

**CSI: COACHING SCIENCE INQUIRY IN RURAL SCHOOLS**

- Gwen Nugent / Gina Kunz / James Houston
- Grounded in the Nebraska State Standards for science inquiry
- Supports for classroom implementation
- Student engagement in science inquiry

**CSI: COACHING SCIENCE INQUIRY IN RURAL SCHOOLS**

**CSI INSTRUCTIONAL COACHES**

- 4 experienced science teachers trained as instructional coaches, representing nearly 10 years of experience in both middle and high school classrooms

**TEACHER BENEFITS**

- Expanded range of instructional strategies
- Opportunity to refine personalized instructional support not typically available in rural settings
- Make contributions to the understanding of effective instructional strategies, especially in science and rural settings
- Stipend for participation in the study (both control and experimental groups)
- Travel expenses related to summer institutes
- Money for instructional materials

**CSI RURAL SCHOOLS IS SPECIFICALLY DESIGNED FOR:**

- Middle and High school science teachers in rural schools (grades 6-12)
- Teachers who are looking to expand their instructional tool box
- Teachers who are looking for professional development readily transferable to classroom practice

**CSI PROFESSIONAL DEVELOPMENT LOGISTICS (2013-2014):**

- Summer institute June 3-6 and June 10-13, 2013, in Lincoln, Nebraska
- Implementation of science inquiry lessons during the 2013-14 school year
- Ongoing coaching support provided via distance technologies

**CSIRURAL SCHOOLS.UNL.EDU**

**90 TEACHERS**

- 70% FEMALE
- 30% MALE

**35,000 MILES**

CSI teachers collectively traveled more than 35,000 miles for the 2012 summer institute

**CSI INSTRUCTIONAL COACHES**

- 4 experienced science teachers trained as instructional coaches, representing nearly 10 years of experience in both middle and high school classrooms

**92% of participants teach multiple subjects**

**GRADES TAUGHT**

- 29% Middle School (6-8) Only
- 33% High School (9-12) Only

**THE NUMBERS SO FAR**

- 70% FEMALE
- 30% MALE

**2012 TEACHER PARTICIPANTS**

- 47 treatment teachers from 43 schools
- 43 control teachers from 33 schools

**STUDENTS OF 2012 TEACHER PARTICIPANTS**

- 1250 high school students (9-12)
- 1650 middle school students (6-8)
- 2700 students from Nebraska & Iowa schools

**WHAT people are SAYING**

- “I always love talking to my students because I believe that the purpose of a teacher is to be a facilitator of learning. My students are constantly learning and teaching me new things.”

- “The kids actually had a chance to show me that they saw relationships instead of necessarily proving it by answering a question. The kids actually had a chance to show me that they saw relationships instead of necessarily proving it by answering a question.”

- “CSI Teacher Participant”

- “I feel that CSI is using a real world curve and it’s really in my students’ favor. The kids ask me more questions, and I think, ‘Don’t give them an answer.’ Instead, I ask them a question.”

- “CSI Teacher Participant”

- “I always love talking to my students because I believe that the purpose of a teacher is to be a facilitator of learning. My students are constantly learning and teaching me new things.”

- “The kids actually had a chance to show me that they saw relationships instead of necessarily proving it by answering a question. The kids actually had a chance to show me that they saw relationships instead of necessarily proving it by answering a question.”

- “CSI Teacher Participant”

- “I feel that CSI is using a real world curve and it’s really in my students’ favor. The kids ask me more questions, and I think, ‘Don’t give them an answer.’ Instead, I ask them a question.”

- “CSI Teacher Participant”

**PROJECT SUMMARY**

- Funded for two years by the U.S. Department of Education
- Involves approximately 160 teachers over two years
- Consists of both experimental and control groups
- Year 1 control group has first option for year 2 experimental group

**PARTICIPATING TEACHER SITES**

**THE RESEARCH QUESTION**

What is the impact of professional development on guided scientific inquiry with follow-up coaching (treatment) vs. no professional development (control) on (a) teacher inquiry knowledge, skills, self-efficacy and beliefs, and (b) student inquiry knowledge, skills, engagement and science attitudes?

**THE NUMBERS SO FAR**

- 90 TEACHERS
- 70% FEMALE
- 30% MALE

**GRADES TAUGHT**

- 29% Middle School (6-8) Only
- 33% High School (9-12) Only

**THE NUMBERS SO FAR**

- 35,000 MILES
- CSI teachers collectively traveled more than 35,000 miles for the 2012 summer institute

**CSI INSTRUCTIONAL COACHES**

- 4 experienced science teachers trained as instructional coaches, representing nearly 10 years of experience in both middle and high school classrooms

**92% of participants teach multiple subjects**

**COURSES TAUGHT**

- 21% ENVIRONMENTAL SCIENCE
- 23% PHYSICS
- 26% CHEMISTRY
- 28% BIODIVIVY
- 35% GENERAL SCIENCE
- 37% EARTH SCIENCE
- 47% PHYSICAL SCIENCE
- 49% LIFE SCIENCE

**YEARS OF TEACHING EXPERIENCE**

- 0-2 years: 15.6%
- 3-5 years: 14.4%
- 6-10 years: 15.6%
- 11-15 years: 15.6%
- 16-20 years: 11.1%
- 20+ years: 18.9%