

# Overcoming the Rural Data Deficit to Improve Quality of Life and Community Services in Smart & Connected Small Communities

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## ACTIVITIES TO DATE

- Met with community committees of the 6 rural shrink smart towns to get feedback on themes for curriculum design and city staff to ask about data collection and future needs
- Through the Iowa League of Cities, the team hosted a panel with speakers from our communities at their Annual Meeting and then 3 interactive online workshops in June 2022 (combined over 200 people attended one or both activities)
- Statistical data team is building a model to estimate quality-of-life perceptions by combining subjective and objective measures
- Data visualization team developing visualization strategies to allow peer comparisons and combinations that may provide guidance for decision-making
- Design studio in Spring 2022 working with 2 communities on community arts strategies as a method to build social capital

## RESEARCH QUESTION

### How can rural communities protect and stabilize quality of life even as populations continue to shrink?

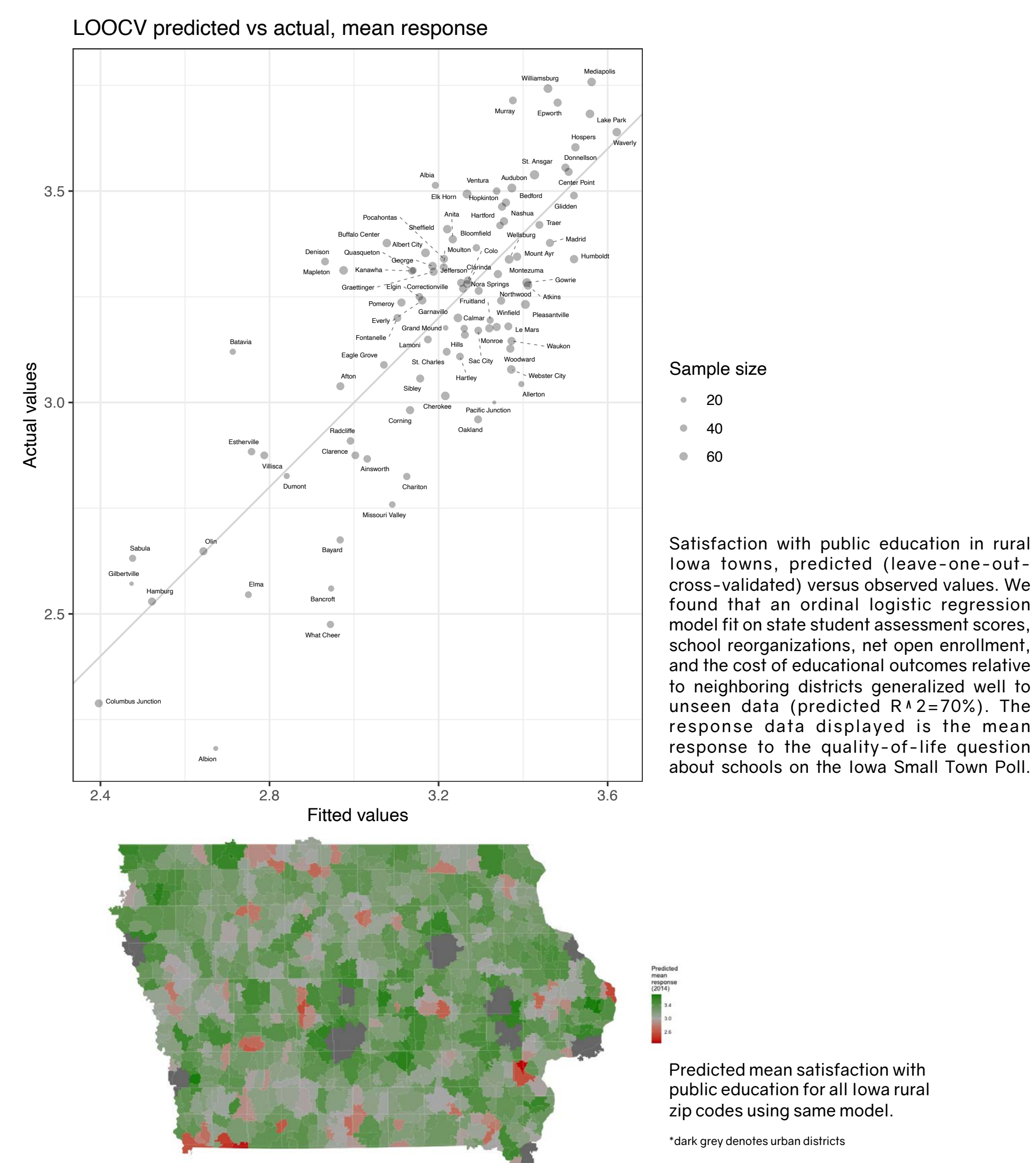
Strategies:

- adapt to this new normal rather than focusing on population or economic growth as an indicator of community well-being
- improve social capital and community services, which have been shown to matter more to people when deciding to stay in or return to a rural place
- encourage more people to be part of civic initiatives by identifying various talents and ways to contribute that may appeal to new people
- use data to understand the specificity of individual community stories and provide ideas about next steps based on peer comparisons

## NEXT STEPS

- finish work on model to estimate as many of the 7 dimensions of quality of life (QoL) as possible given available data
- additional design studios in Fall 2022 and Spring 2023 working with shrink-smart communities and then assess effects
- visualization strategy that allows peer comparisons and could assist in decision-making, grant writing, and planning processes
- preparing and testing content for an open-access online publication, *The Field Guide to Rural Smart Shrinkage*
- continue to share knowledge and collect success stories from small towns about QoL initiatives that demonstrate what is possible even as populations shrink
- publish peer-reviewed journal articles related to QoL as well as develop educational content for public consumption.

## DATA MODELING



## DATA TOOLS & CURRICULUM DEVELOPMENT

The following plot is called a Parallel Coordinate Plot (PCP). It is used to analyze multivariate numerical and categorical data, which will allow users to compare observations across multiple variables. Note your city is highlighted and populated first as it compares to other cities in Iowa.

Testing visualization tools for peer comparisons – shown is a parallel coordinate plot (PCP) for 6 rural shrink smart towns

curriculum development using Enquiry-based learning (EBL)

How Can I Participate in My Community?

2022 SMALL CITY WORKSHOP  
How Can Community Arts Help People Feel Like They Belong in Your Town?

THANK YOU TO OUR SPONSORS

Blue Horizon Energy, MSA, SOLUTIONS

Thanks to support from the National Science Foundation, this year's workshops are free.

Visits to partner communities

## BROADER IMPACTS

- local and national media coverage about rural quality of life (QoL) has led to more focus on QoL in community development discussions in Iowa and around the Midwest
- disseminating knowledge through the Iowa League of Cities and other stakeholder groups including speaking invitations in Iowa, Nebraska, North Dakota, Oklahoma, and Wisconsin
- training graduate students at the master's and Ph.D. levels including women and students from underrepresented groups (one master's graduate joined Iowa State as a faculty member starting in Fall 2022)
- undergrad REU and LSAMP students working on social networks, housing, and community profiles, and data science students working on capstone projects and data visualization
- bringing attention and validation to small and rural towns that are rarely featured in academic research

RURAL IOWA

How 3 Iowa towns are getting smaller but smarter through Iowa State program

By Pat Kinney / IowaWatch | February 24, 2022

IowaWatch  
AN INVESTIGATE MIDWEST NEWSROOM

Feb. 2022 series through IowaWatch included interviews and visits in 3 of our partner towns

Generations of local leaders prosper Bancroft, population 699

Iowa's shrinking towns could be state, regional mentors

RURAL SHRINK SMART