## Study on How College Science Courses Influence Elementary School Teachers

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## Collaborators

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# NASA Opportunities for Visionary Academics (NOVA)

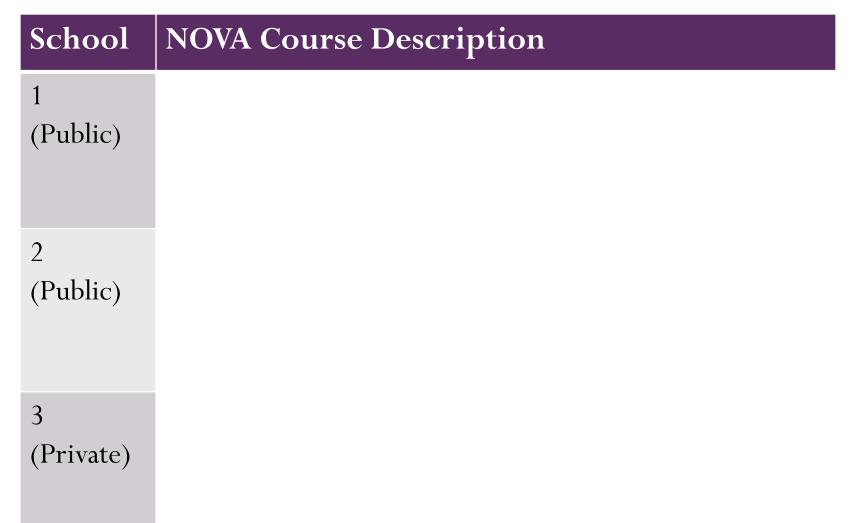
- (http://www.novaprogram.org/Home)
- >100 institutions participated
- Development or modification of "reform" science courses for elementary education majors
  - Courses incorporate an inquiry-based approach and center on student interactions

# National Study of Education in Undergraduate Science

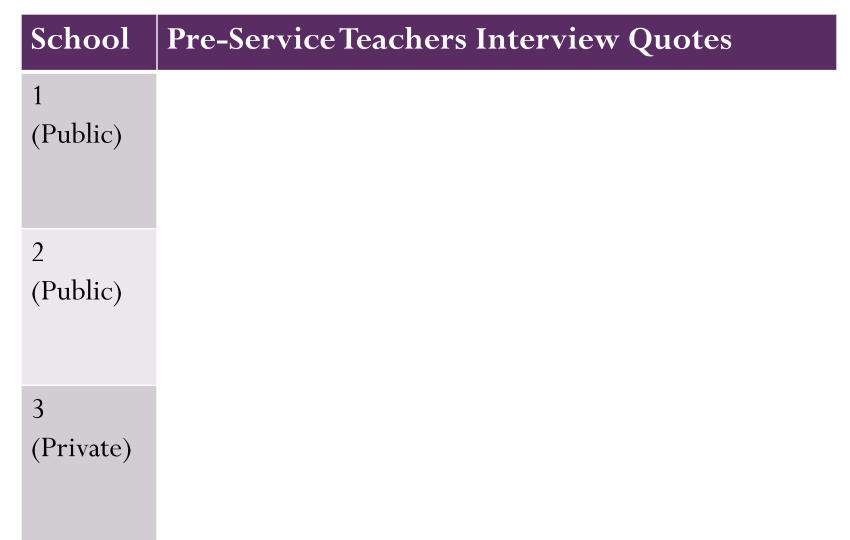
- Follow-up to the NOVA project
- Total of 30 institutions around the country over  $\sim$ 3 years
- Site visits
  - Class Observations
  - Interviews of college faculty, pre- and in-service teachers
  - RTOP\*
  - On-line Surveys
  - Content Questions

\* (Piburn and Sawada, 2000)

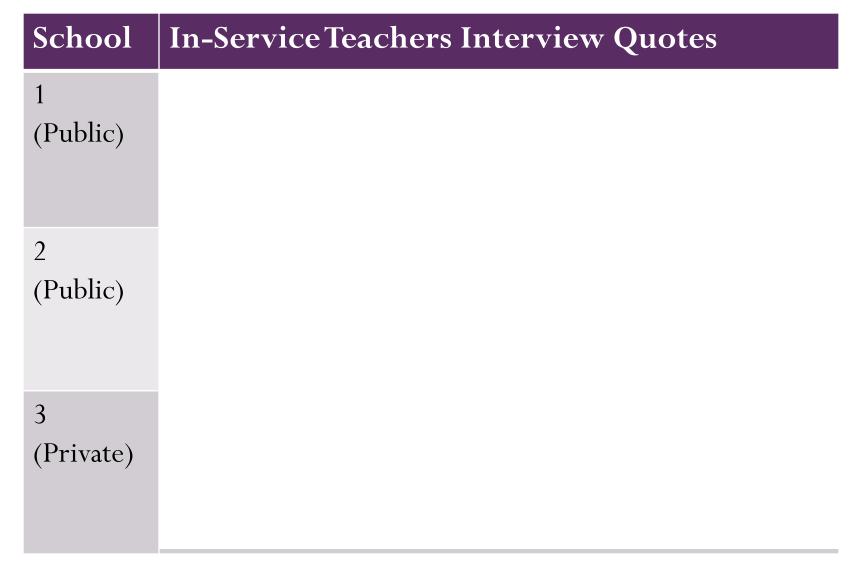
## The Course and Schools



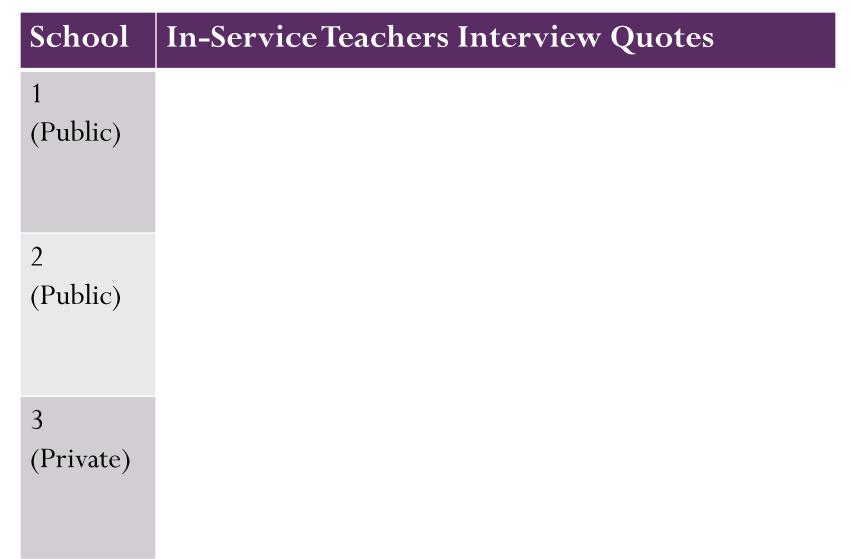
# **Views of Pre-service Teachers**



# Views of In-service NOVA Teachers



### Views of In-service Non-NOVA Teachers



### **Observations of Elementary Classes**

School	Observation	Co	mments
1			
(Public)			
2 (D.11:)			
(Public)			
3			
(Private)			
(* F	ull Option Science System <u>ht</u>	p://www.foss	web.com/)

# **Conclusions and Questions**

- All observed elementary teachers at least attempted to teach by reform methods.
  - What role does the provided curriculum play in this decision?
- When the college content course also integrates pedagogy, it is better remembered by in-service teachers.
  - Where should the line be drawn between content and methods courses and should more effort be placed into their integration?
- Interactions between reform faculty and pre-service teachers have a positive influence.
  - What can/should be done to facilitate these interactions?