



AERA 2008 Annual Meeting • NEW YORK, NEW YORK • MARCH 24 THRU 28

**Developmental Study of Action Research in Teacher Preparation:
2001-2007**


Building Capacity to Make Data-Based Teaching Decisions

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American Educational Research Association

Studying AR - Dissemination



- PDS 2002: AR Projects
- AERA 2002: AR Projects
- AACTE 2003: What Counts as AR?
- PDS 2004: Improve AR Process
- PDS 2005: Action Research Fellows
- AACTE 2005: Evaluating AR
- NCTE 2005: AR Fellows
- AERA 2006: Framing AR as Teaching

Why action research?



— [**How do we help teachers make informed teaching decisions?**

— [**“Focused inquiry by teachers...to improve their teaching and schools” (McCutcheon & Jung, 1990)**

Program context



— [**5-year program; 3 years in public schools (PDS)**

— [**AR Proposals: Spring of Y4 -“Participants”**

— [**Full-time teaching Fall of Y5 - “Interns”**

— [**AR Papers, Poster, Presentation: Spring of Y5**



Program support

EDUC 600 Teacher as Researcher
2-years Years 4, 5

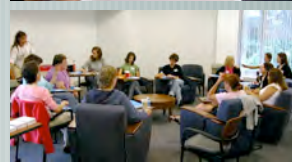
F2F Seminars Fall/Spring,
eCampus

AR Faculty input

Host teacher and University
liaison review of topic selection,
proposal and paper

AR Contacts at individual schools

AR Fellows: PDS teachers
conducting AR



Research questions

Q1 What program changes were made?

Q2 What were interns studying?

Q3 What was learned about students and student learning?

Q4 What were interns learning about their teaching?



Questions - Data Sources

Q1 Program changes

Q2 AR focus

Q3 Students

Q4 Teaching



- Abstract
- Rationale for topic
- Related research
- Method
- Results and Discussion
- Conclusions: impact on teaching
- References
- Appendices

Data 2001-2007

Year	Physical Copy	N students	20% sample	REPORT .DOC	CONFERENCE .PPT
2001	X	46	9	45	
2002		59	12	57	
2003	X	86	17	81	12
2004		43	9	37	34
2005	X	83	17	66	65
2006	X	80	16	74	74
2007	X	80	16	72	72
TOTALS		477	96	432	257



Improvements for 2001-2002

- Project Criteria
 - Personal professional practice
 - Teaching improvement
 - Ongoing activity
 - Derived collaboratively
- AR Process
 - Action Research IRB category in place
 - Integrate AR in courses
 - Research question activities in seminars
 - Questions focus on student learning
 - Move away from experimental treatments

Improvements for 2002-2003

- Course integration
- Participants questioning Interns
- Host teachers as data sources
- Summer sessions with PDS teachers
- AR Contacts

Improvements for 2003-2004

- Topic selection improved
- Identifying data sources from research q's
- Communication problems still exist
- Rubric revised

Improvements for 2004-2005

- Seminar - WWW Content
 - Topic selection, methodology, results
- Communication
 - Joint meetings: student-host-liaison
 - Topic should be a PDS priority
 - Feedback on "where you are" in the process
 - AR fellows who model AR
- Materials
 - Text and handouts
 - Readings - Admittance tickets
 - Activities - peer critiques, work groups

Improvements for 2005-2006

- Involvement of students-host-liaison
- Focus on PDS student learning
- Assistance of interns with participants
- Design of activities (text, website)
- Analysis of AR on graduates' teaching

RQ1-Program Changes?

Method

Author(s) <small>(Last name if exemplar)</small>	Year	Grade- Class	Title	Context	Teaching Practice	Data Sources	RQ	Student Impact	Teacher Impact
<small>(Last name if exemplar)</small>	<small>2001-2007</small>	<small>Grade level - subject</small>	<small>Exact paper title</small>	<small>Enter school name, District name if non-exist</small>	<small>Code list</small>	<small>List</small>	<small>Para, comment, comment</small>	<small>Code list, selective quote (if avail)</small>	<small>Code list, selective quote (if avail)</small>
Parson	2001	K-language en	Student self graphing vs. teacher graphing	School name: no School context: Rural Participant context: Age Gender	Students graph their own test results vs. teacher graph student test scores	Tests	Does the rate of a child's achievement increase when he/she starts reading his/her own results? RQ? Findings? 200 Findings? Achievement? 200	Slight increase in test scores measured by all students who graphed themselves.	Would use self graphing in classroom for those students who are having problems with capital letter recognition.
Puckett	2001	5-writing	Influence of Daily Oral Language™ in a writing workshop	School name: no School context: Faculty Teaching Participant context: Age Gender Special needs	Writing conferences, mini-lessons, peer feedback Focused on spelling, organization, punctuation, grammar usage	Writing, DOL, mini-lessons	Does student writing produced during writing workshop reflect the influence of DOL mini-lessons? RQ? Findings? 200 Findings? Achievement? No	13% increase in overall writing scores. 80% increase in grammar and usage scores "Writing more interesting, and detailed."	Do not use DOL as sole teaching method. Develop mini-lessons based on student needs.
Taylor	2001	5o-Spanish	Does using a variety of teaching techniques increase student mastery in Spanish?	School name: yes School context: Rural Teaching Participant context: Age Ability levels Other characteristics	Hands-on and oral physical response Music Mime/movements, worksheets, textbooks	Test	Does using a variety of teaching techniques increase student mastery in Spanish? RQ? Findings? 200 Findings? Achievement? 200	83% Test average using hands-on and oral physical response 81% using music 79% using mime/movements, worksheets, textbooks	Use all 3 teaching techniques.
Ohio, individual case description	2002	K-math	THE EFFECTS OF USING THE GRAPH CLUB WITH KINDERGARTNERS	School name: yes School context: Suburban Faculty Parent Participant context: Age Gender Test scores Ability levels	Whole class instruction using computer Center individual help	Interviews Observations	THE EFFECTS OF USING THE GRAPH CLUB WITH KINDERGARTNERS RQ? Findings? 200 Findings? Achievement? no	I found that most students could create graphs and seemed to have fun with the program. I also found that most of the students could not say anything meaningful about the graphs they had created.	Understand AR process Would not use for independent work.

RQ2-Study Choice

RQ3-Student Impact

RQ4-Teaching

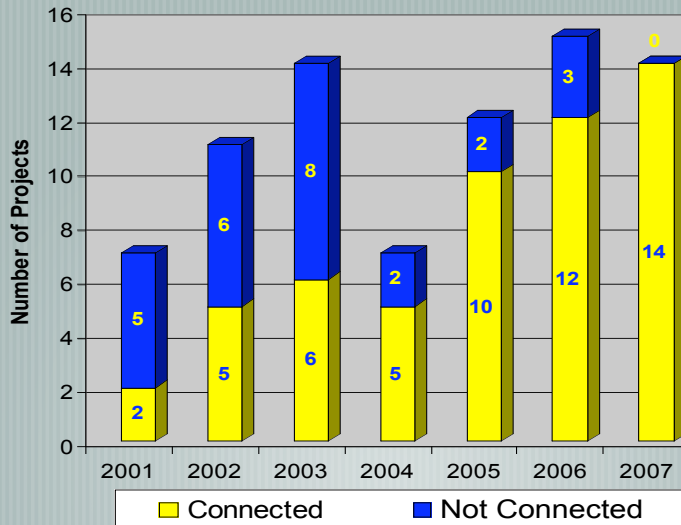
Developmental summary

Program Changes	AR Focus	Student Learning	Teacher Learning
Shift focus of project choice to student learning Group projects allowed	Reduced classroom management topics to critical content areas Literary topics increased	50% (2001) Connected teaching strategies to student performance 20% (2001) Understanding of student differences	0% (2001) valued reflectivity in teaching 0% (2001) alignment of teaching and assessment 10% (2001) value multiple strategies 10% (2001) AR data informed decisions
Frame a RQ in terms of learners, learning, and teaching strategy	Content - strategies (e.g., journals, graphic organizers, learning stations, literature circles)		60% would use AR (01-07)
More detailed context descriptions (student needs, characteristics) Data analysis guidance, how will analysis help teaching tomorrow?	Connections between project choice and student needs: 40% in 2001; 100% in 2007 Fewer group projects	92% (2007) Connected teaching strategies to student performance 42% (2007) Understanding of student differences 50% (2007) Connected strategies to student performance and student differences	42% (2007) valued reflectivity in teaching 35% (2007) alignment of teaching and assessment 42% (2007) value multiple strategies 57% (2007) AR data informed decisions

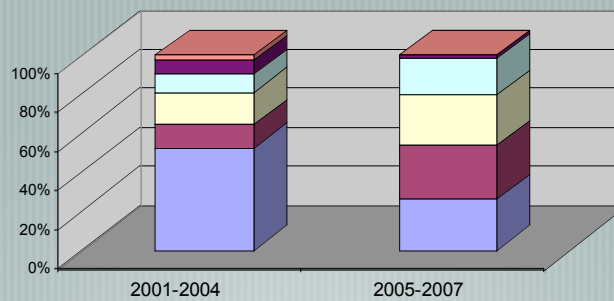
RQ2-AR Topics

- Top 4 most frequently studied topics for interns
 - Behavior, motivation
 - Journals, integration of writing
 - Graphic organizers, study skills
 - Multiple teaching strategies

RQ2-Increasing connection between study context and instructional strategies



RQ3-What interns learn about students and student learning

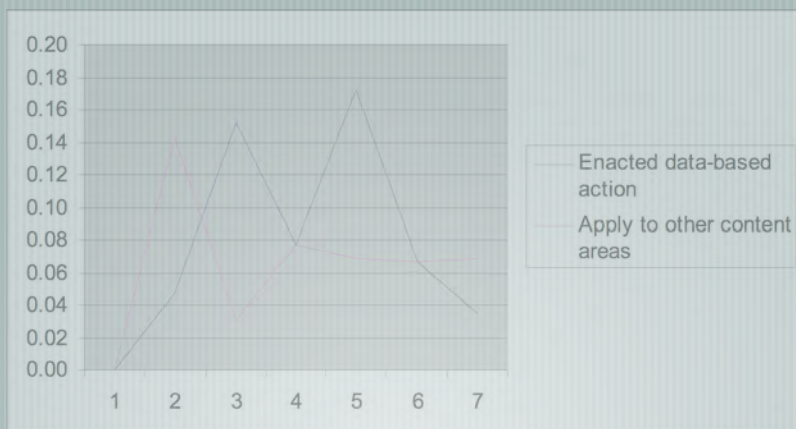


RQ4-What interns learn about their teaching



***Proportions of projects coded in various categories 2001 - 2007**

RQ4-What interns learn about their teaching



***Proportions of projects coded in various categories 2001 - 2007**

RQ4-What interns learn about their teaching



*Proportions of projects coded in various categories 2001 - 2007

Developmental change categories

RQ Model: Students - Content/Strategies - Learning


III - Determining your action research focus:

Q1 - Who will be your students next fall?

Q2 - What student learning will you focus on?

Q3 - What teaching strategy will you use to help students learn?

AR Idea	Students?	Learning?	Strategy?
5 th graders have difficulties with fractions	5 th grade	Fraction concepts and using realisms	Going visual might help students "see" fractions



Action Focus: how will AR data today help teaching tomorrow?

Research is teaching = Teaching is Research

AR knowledge base at individual PDSs

Development change 2001-2007

Incremental and layer changes: *time, coordination, and collaboration*

Seminar content and materials

Seminar assignments

AR focus in other courses

PDS and University mentors



Future development

Data-based decision-making/action

Reviewing past AR studies in a PDS: building a localized knowledge base

Investing Host Teacher and Liaison in process

Continual professional development on what AR is, what counts, and how it helps schools, teacher educators

From archiving to data mining

Continue to study the AR program/process/impact

