

# LEARNING ABOUT LEARNING THROUGH RESEARCH

ASHE – Charlotte, NC November 2011

Anabella Martinez, Ed.D  
Universidad del Norte (Barranquilla, Colombia)

Julie Schell, Ed.D  
Harvard University (Cambridge, MA)

---

# Study Purpose

- Explore undergraduate students' experiences of learning research through a S-UR program and the meaning students attribute to such experiences –student voice.
-

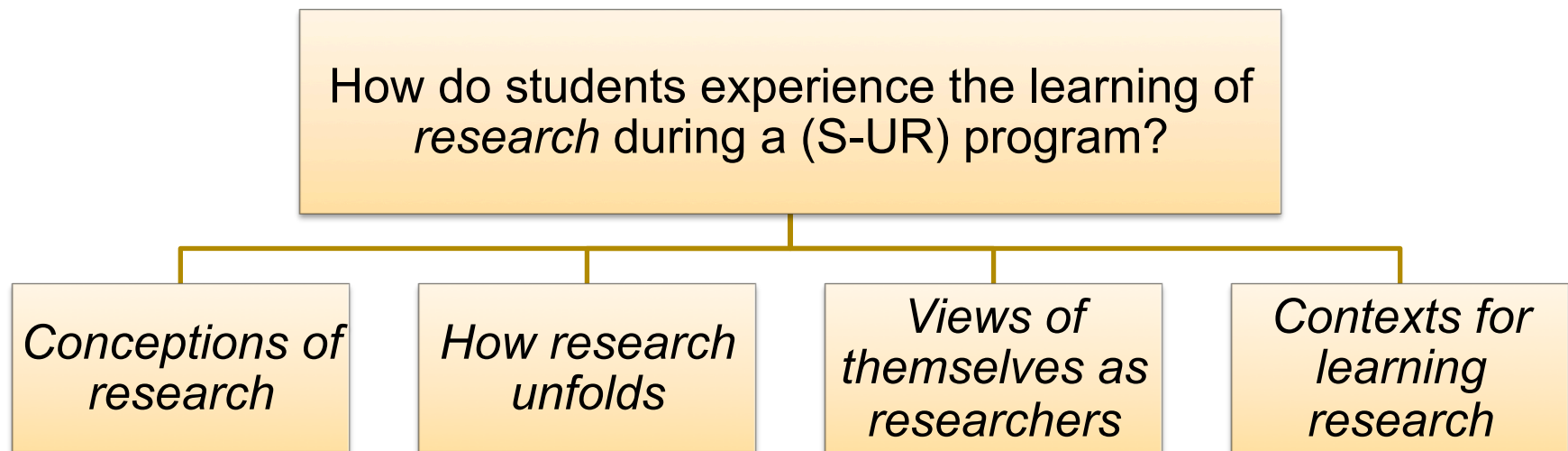
---

# Study Purpose

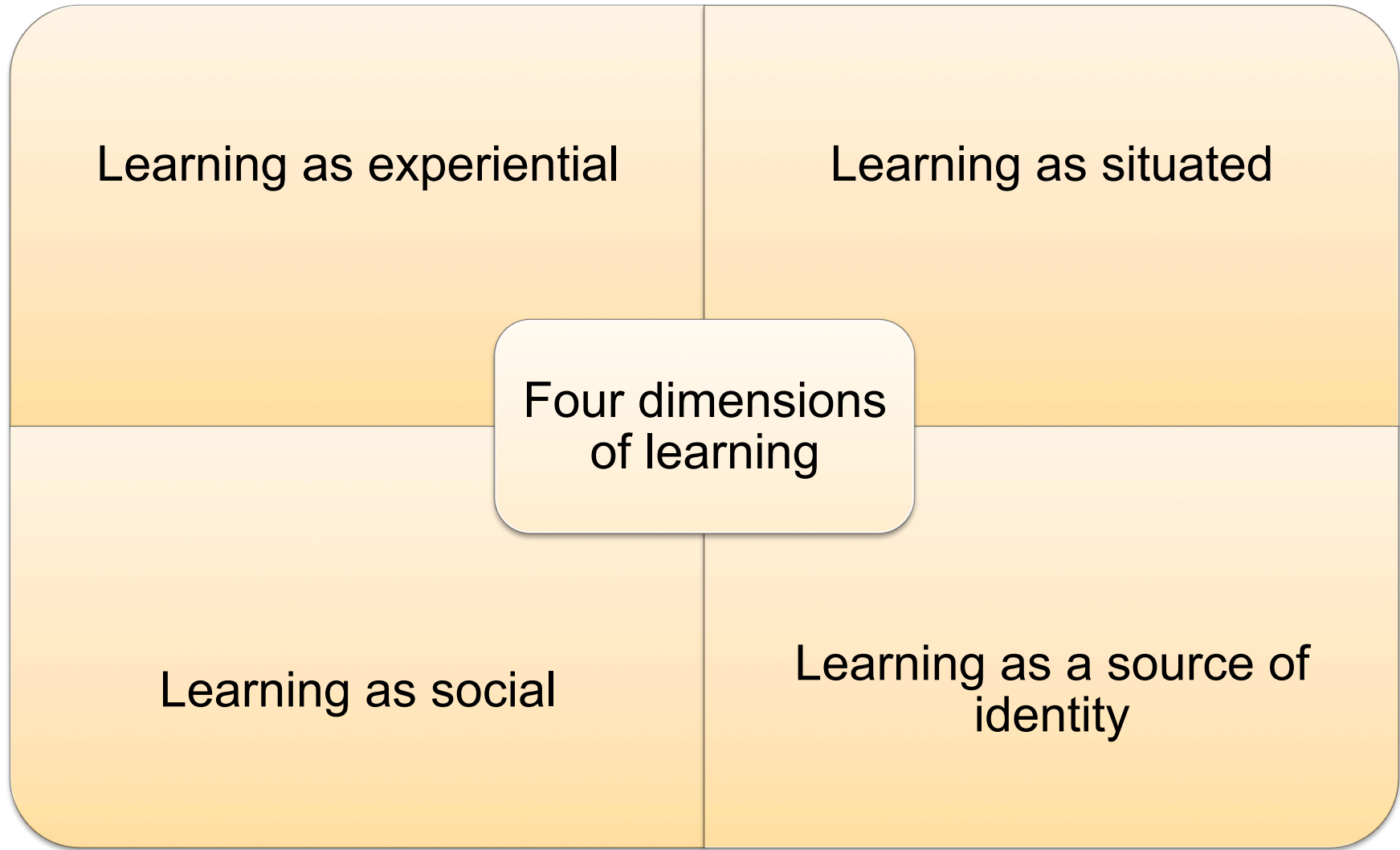
- Explore undergraduate students' experiences of learning research through a S-UR program and the meaning students attribute to such experiences –student voice.
  - Identify various contexts within a S-UR program that students perceive as meaningful for learning of research.
-

---

# Research Questions



# Conceptual Framework



---

# Research Design

## **Qualitative design**

Hypothesis  
generating  
approach

## **Study Site**

Research  
University, Very  
Heavy Research  
Activity in NE U.S.

## **Data Collection**

Interviews  
Observations  
Document  
analysis

---

# Study Sample by Data Source

## Demographics

Majors	Gender	Race	Level of study	Home institutions
<ul style="list-style-type: none"><li>• 55.5% Social sciences/ Humanities</li><li>• 44.5% Natural sciences</li></ul>	<ul style="list-style-type: none"><li>• 55.5% Women</li><li>• 44.5% Men</li></ul>	<ul style="list-style-type: none"><li>• 55.5% African American</li><li>• 45.5% Latino</li></ul>	<ul style="list-style-type: none"><li>• 77% Juniors</li><li>• 22% Sophomores</li></ul>	<ul style="list-style-type: none"><li>• 66% Public research</li><li>• 22% public 4 year</li><li>• 11% private 4 year</li></ul>

# Study Sample by Data Source

## Primary study participants

9 students (response rate 82%)

Baseline and exit interviews, observations, document analysis.

## Focal Study Participants

4 students selected among primary study participants.

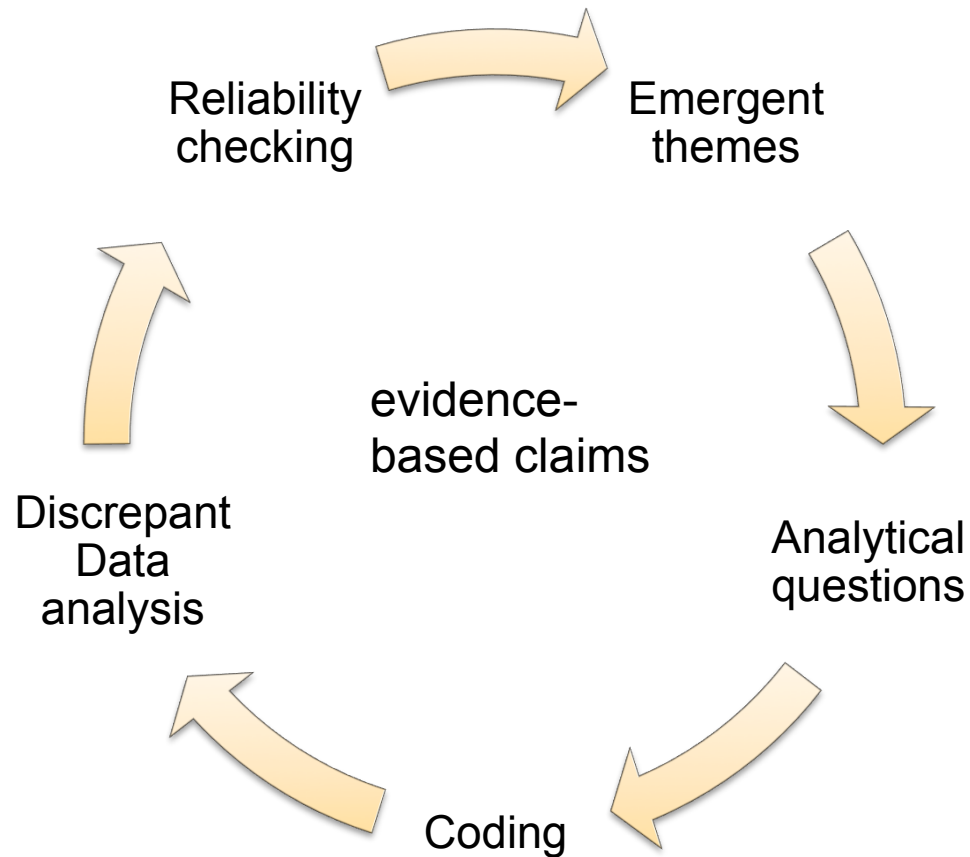
Baseline, 2 post-observation, exit and follow-up interviews; 26 observations throughout the S-UR program, and document analysis

## Secondary Study Participants

5 S-UR program staff ( 2 focal study participants' research sponsors, 2 S-UR program graduate student mentors and S-UR program administrative assistant)

One end of program interview

# Data Analysis



---

# Study Findings – Data Claim 1

## **Analytic questions:**

What changes, if any in her/his view of learning does this study participant attribute to her/his S-UR program participation?

What does this study participant refer to learning about herself/himself as a learner through her/his S-UR program participation?

---

---

# Study Findings – Data Claim 1

**Analytic question 1:** What changes, if any in her/his view of learning does this study participant attribute to her/his S-UR program participation?

*Study participants come to the S-UR program with an understanding of learning and of themselves as learners, specifically in regard to what encourages and challenges them in their subject-matter learning. They refer to the S-UR program experience as expanding the understandings of learning they developed through prior experience.*

---

---

# Study Findings – Data Claim 1

**Analytic question 1:** What changes, if any in her/his view of learning does this study participant attribute to her/his S-UR program participation?

*Study participants come to the S-UR program with an understanding of learning and of themselves as learners, specifically in regard to what encourages and challenges them in their subject-matter learning. They refer to the S-UR program experience as expanding the understandings of learning they developed through prior experience. They point to gaining: a) an increased awareness of and confidence in their abilities to enact learning and b) a different view on the nature of knowledge. These insights differ by study participants' academic discipline: humanities and social sciences participants refer to gaining a deeper awareness of their abilities to enact learning, while natural sciences participants refer to acknowledging that there are limits to the knowledge acquired through learning.*

---

---

# Study Findings – Data Claim 1

**Analytic question 2:** What does this study participant refer to learning about herself/himself as a learner through her/his S-UR program participation?

**Result** *Study participants gain an increased awareness of and confidence in their abilities to enact learning*

---

---

# Study Findings – Data Claim 1

“But she always asked me, and eventually I developed a system where I was able to do it effectively in my head, but that’s because I thought of—I started thinking how, thinking about how I think, and thinking of little shortcuts that I knew would be easy for me to do, you know, and that’s where I really, really started to get better at it, because the way that she went about it and did it, and the way that she processed numbers was different than the way I processed numbers, and I was able to identify that and I was able to pinpoint how I would be able to process it and, and keep it, you know, and retain it, you know what I mean?” ....

---

---

# Study Findings – Data Claim 1

**Result:** *Study participants gain a different view on the nature of knowledge.*

---

---

# Study Findings – Data Claim 1

**Result:** *Study participants gain a different view on the nature of knowledge.*

“Other people. I feel like we never learn alone. I find that impossible. Even if you’re reading, you’re learning from another person, or just, like, talking. Talking. Communication, I guess....Interactions, like, not just with people but, like, with things. I mean, like, with the world, because you could see something happen and that might teach you something....”

---

---

# Conclusions

- As undergraduates engage in and learn research, they can learn about learning and about themselves as learners.
  - What students learned about learning and about themselves as learners through their S-UR program participation differed by academic discipline
  - Prior UR experience, academic discipline and S-UR project ***matter*** for what students can learn about research and themselves as learners.
-