Understanding the Contribution of Short-Term Adult Education Programs to Lifelong and Life-Wide Learning

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Adult Second Language and Literacy Development

- Take *time* to progress
- Engage learning in multiple life contexts
- Enhance numerous life outcomes
- Operate across generations

Understanding Adult Second Language and Literacy Development

- Adopt a longitudinal perspective
- Follow individuals over time
- Observe participation in programs, further education, and life history events
- Examine *lifelong* and *life-wide* learning
- Analyze changes in key life outcomes

The Longitudinal Study of Adult Learning (LSAL)

Portland State University

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U.S. Department of Education

National Institute for Literacy

LSAL Perspective

- Look at how programs fit into the lifelong and life-wide landscape of adults' learning, rather than at how adults fit into LLN programs as students
- We'll see that things look considerably different from this vantage point

LSAL Design

- Decade-long *panel study* of Portland (Oregon) high school dropouts, age 18-44 at the beginning of the study
- Representative sample of ~1,000 drawn from local rather than national population of dropouts
- Includes both program participants and nonparticipants
- Examines program participation and other learning activities, social and economic changes, and changes in literacy skills, literacy practices & technology use over time
- Periodic in-home interviews and literacy assessments and SSN-linked administrative data (with individuals' permission)
- Smaller-scale, more in-depth qualitative components

LSAL Realized Sample

- N = 940
  - 496 from RDD Frame
  - 444 from Student Frame
- High level of diversity in sample
- 90% sample retention over 8 years
- 39 additional pilots for instrument development, training & qualitative studies

Some LSAL Demographics

- Average age is 28 (at Wave 1)
- 50 % female and male
- 9 % foreign-born (English 2nd/other lang.)
- 35 % minority
- 34 % live in poverty
- 29 % report a learning disability
- 34 % took special education
- Broad range of assessed basic skills

LSAL Timeline

- ✓ wave 1 1998 – 1999
- ✓ wave 2 1999 – 2000
- ✓ wave 3 2000 – 2001
- ✓ wave 4 2002 – 2003
- ✓ wave 5 2004 – 2005
- ✓ wave 6 2006 – 2007

Categories of LSAL Data

- Background information
  - Demographics
  - Family characteristics
  - School history including reasons for leaving

- Special modules
  - Life turbulence details
  - Self-study details
  - Learning disabilities details
  - Health status & health care utilization details
  - Oral vocabulary assessment
  - Writing assessment
  - Reading subskills assessment

Categories of LSAL Data (con't)

- Repeated Measures
  - Functional literacy assessment
  - Literacy practices
  - Self-assessed skills and skill changes
  - Participation in basic skills programs, receipt of GED
  - Linked admin data on program participation
  - Learning activities
  - Postsecondary education
  - Employment, job characteristics, wages & earnings
  - Linked data on quarterly hours and earnings
  - Work-related training
  - Household & family composition
  - Life goals and aspirations

Literacy Measures in LSAL

Measures of Proficiency

- Repeated measures of TALS Document Literacy
- SSN-matched GED test scores

Measures of Practices

- Repeated measures of literacy practices
- Repeated self-reported changes from wave-to-wave in reading, writing and math

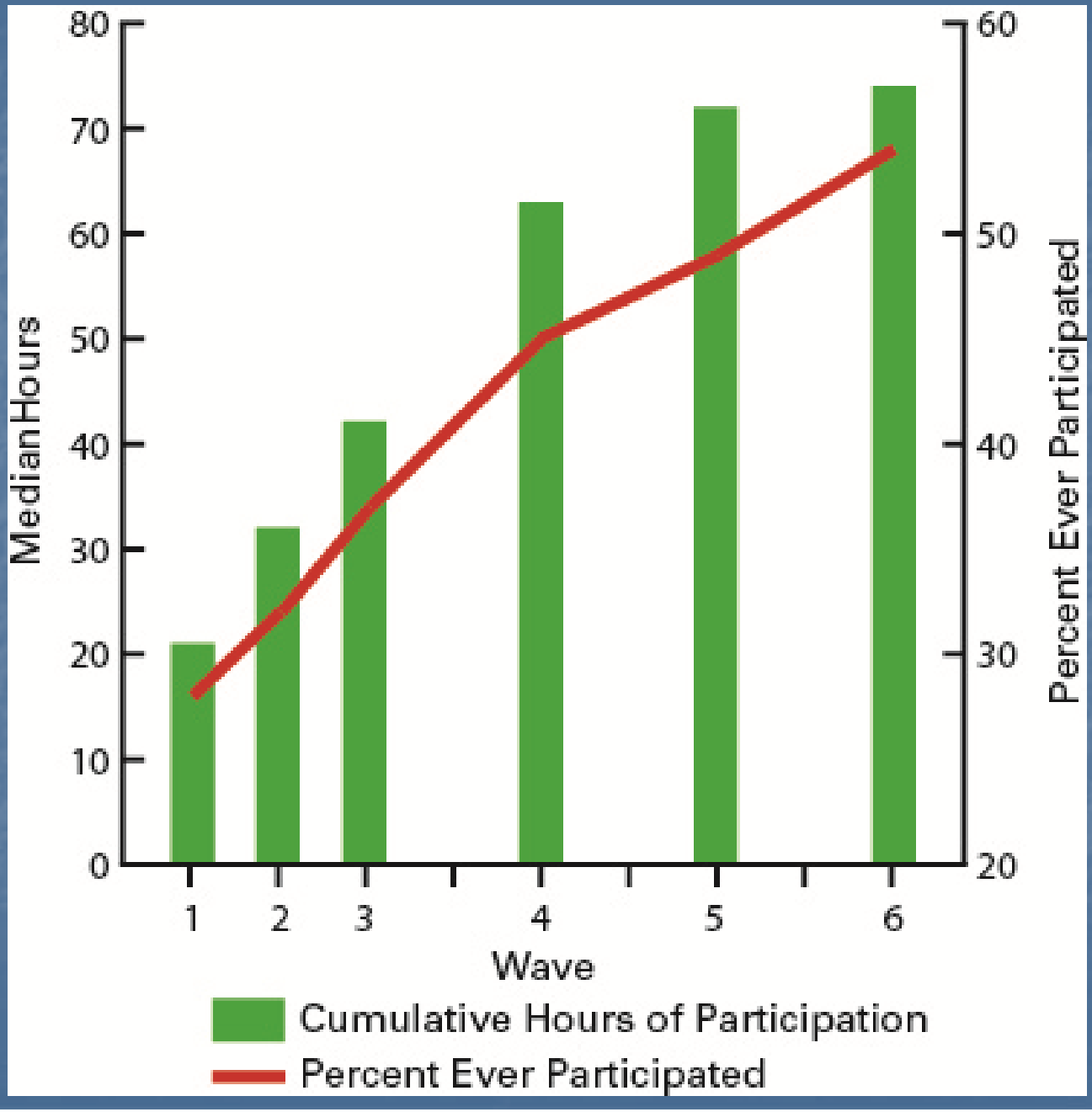
Measures of Component Skills

- Oral vocabulary
- Word recognition
- Fluency
- Holistic writing

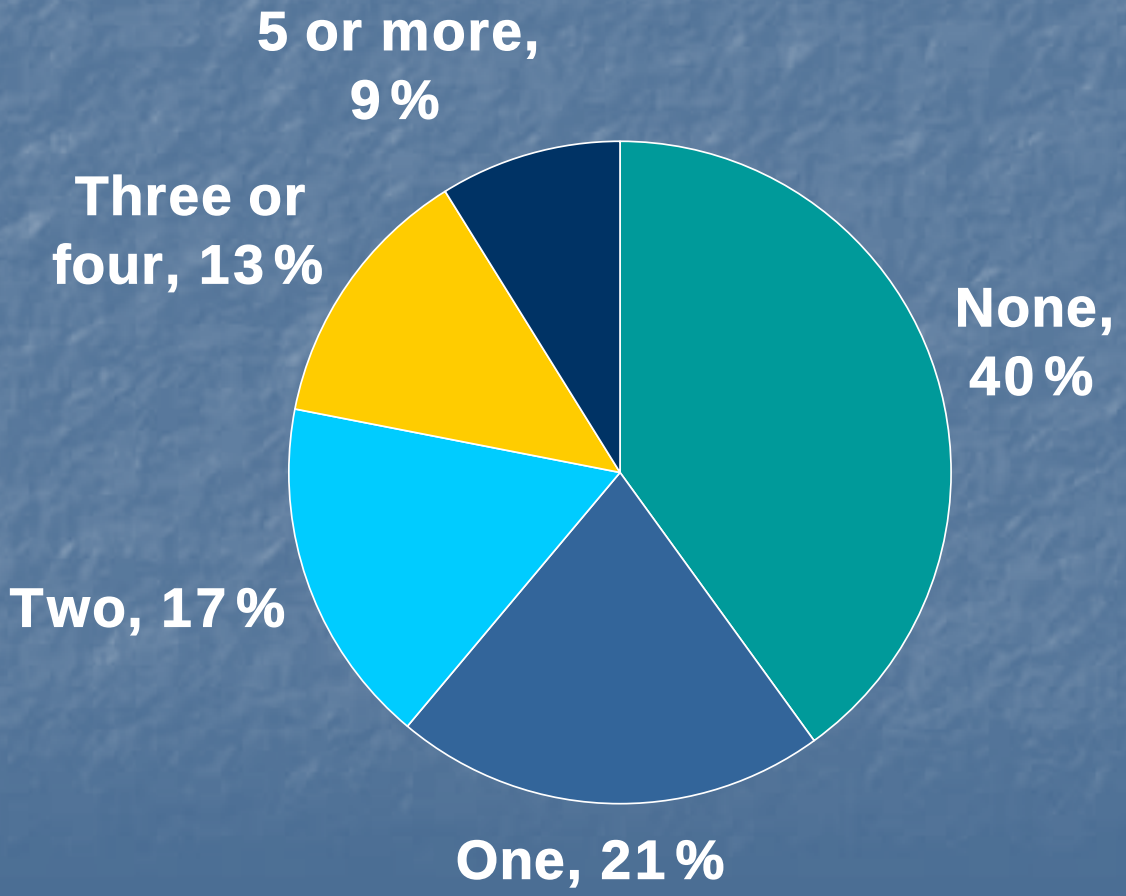
Literacy Practices Measures

- Engagement in literacy activities in home, workplace & community contexts
- Measure both breadth & frequency of use
- Provide vital link between standardized proficiency test scores and lifelong, life-wide literacy development and use
- Scales were developed to be longitudinally stable: Measure the same thing at different points in time

Cumulative Participation Across Waves



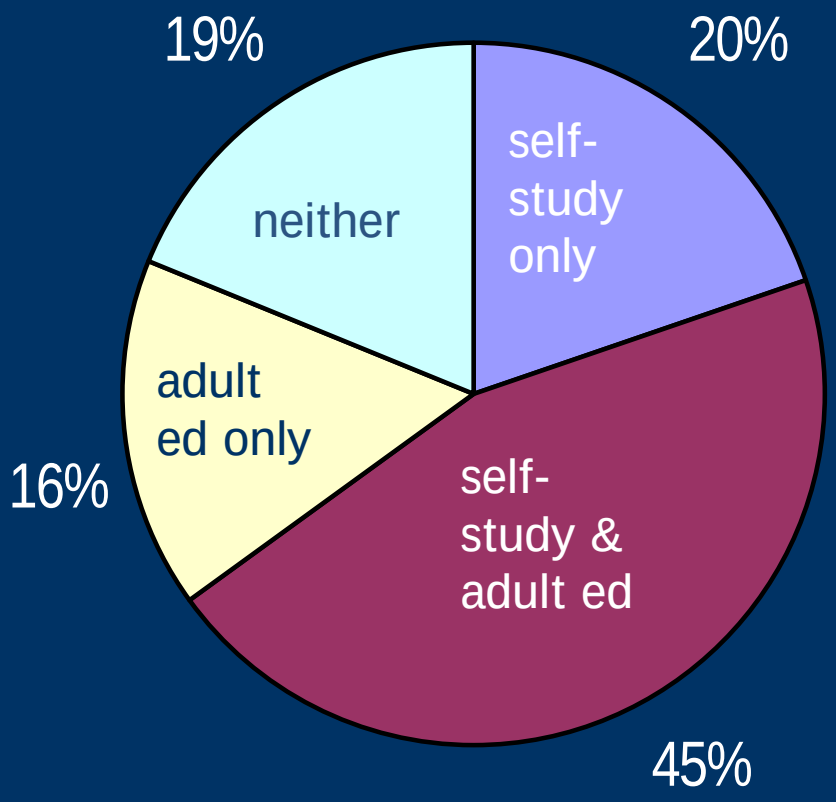
Periods of Participation in Basic Skills Programs Since Leaving School



Self-Study in the LSAL

- Defined as “studying on your own to improve your reading, writing or math skills or prepare for the GED”
- Probes distinguished such self-study from activity conducted in school or as part of a basic skills or GED class
- In-depth qualitative interviews confirmed the validity of these self-reports

Self-Study and Participation

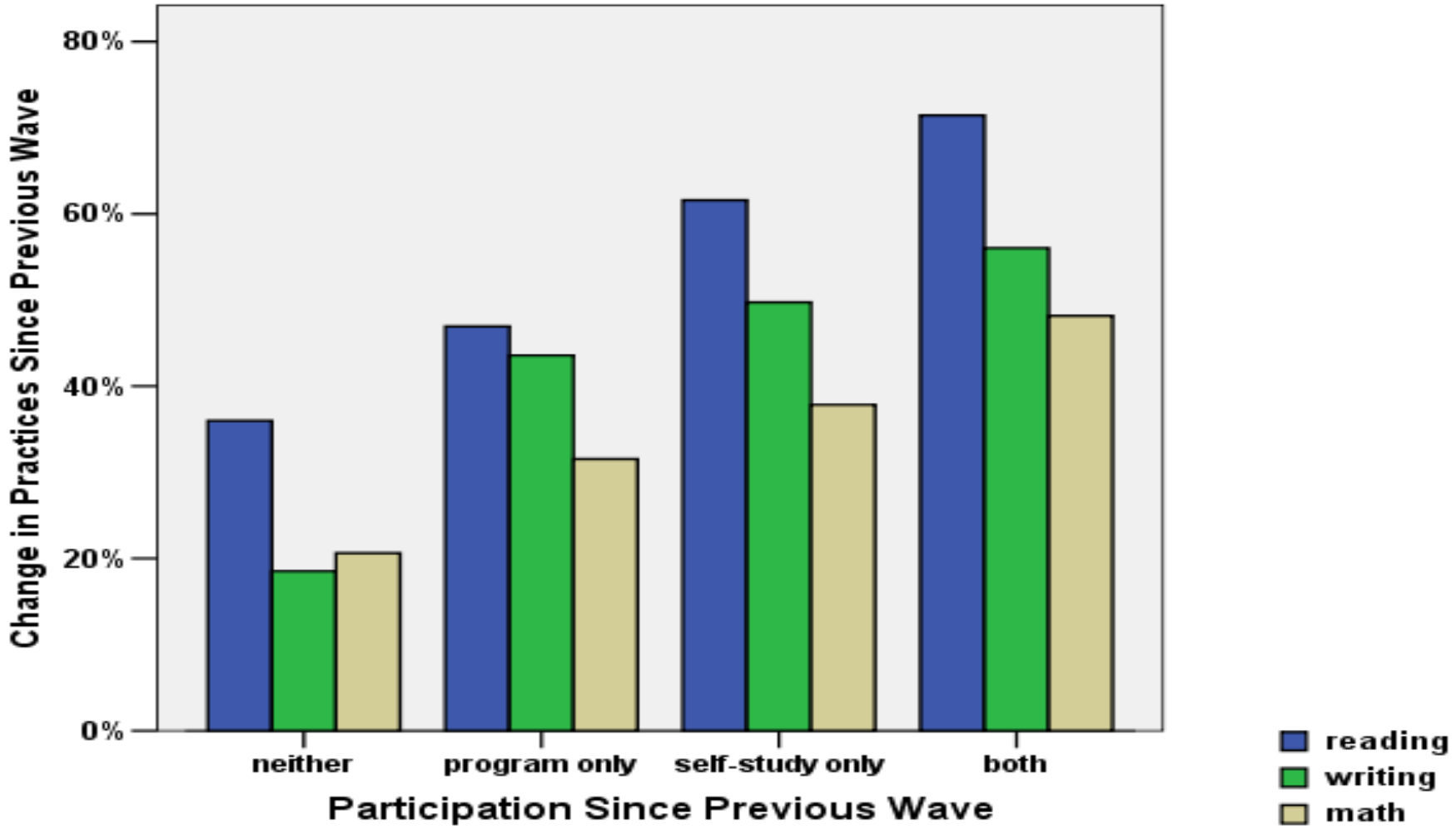


65% have self-studied

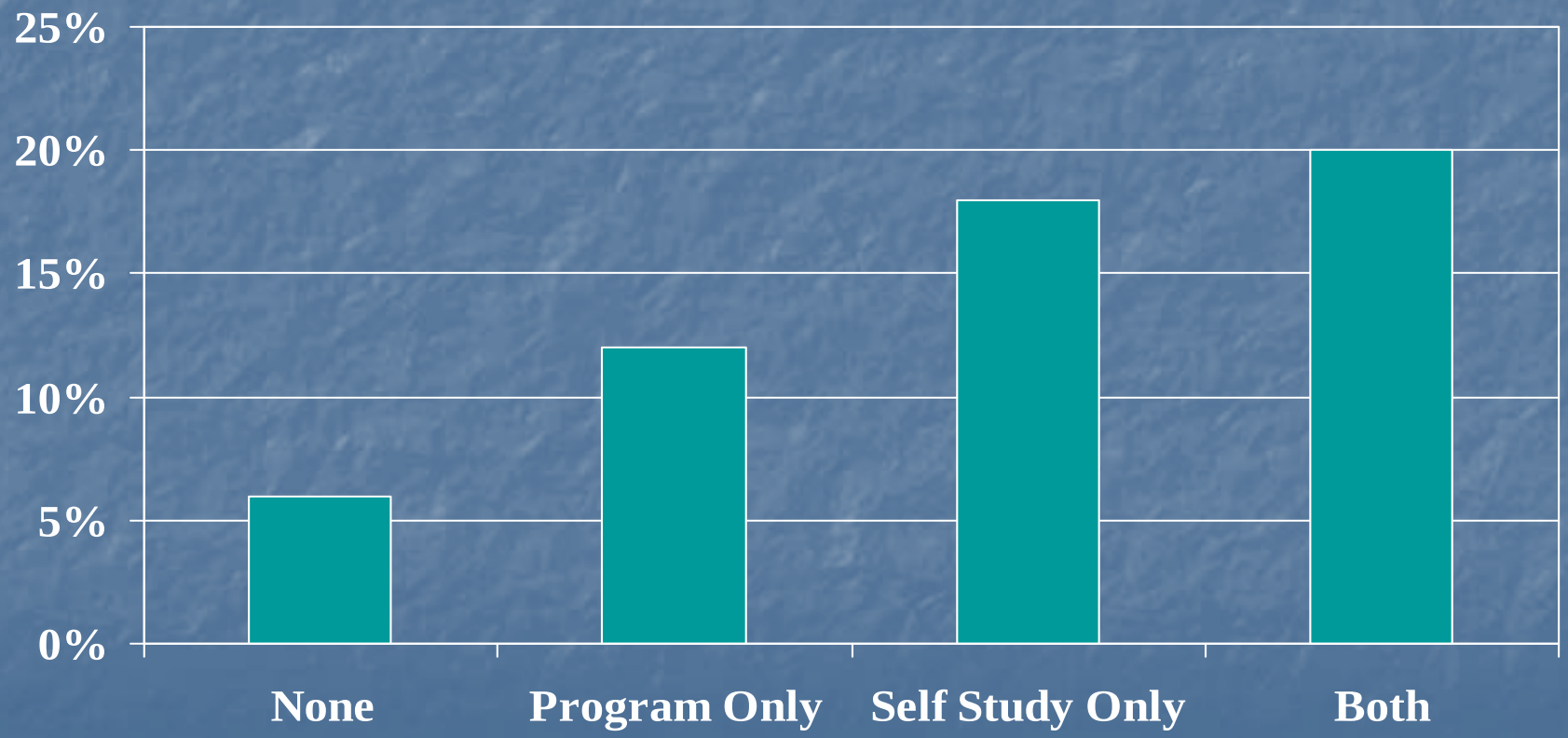
62% have taken adult ed

(between leaving school and Wave 4)

Self-Reported Change in Literacy Practices by Participation & Self-Study



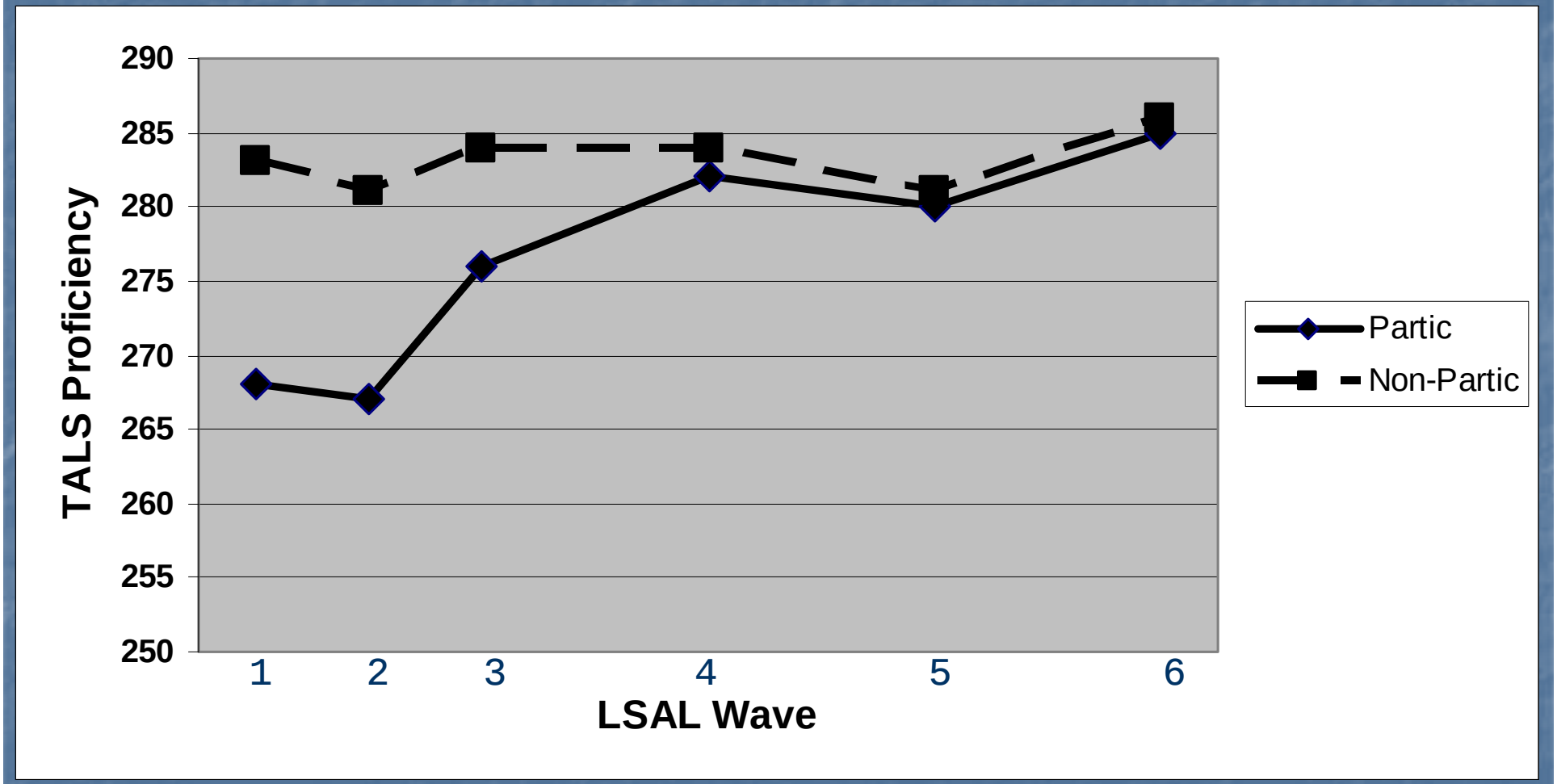
Percent GED Attainment by Participation & Self-Study



Program Impact on Literacy

- Literacy proficiency growth over relatively short periods of time is *not* affected by program participation
- Pre-post test accountability data, that apparently show systematic gains in participants' proficiency, do not contrast participants' gains with those of comparable non-participants; LSAL indicates their gains are equivalent
- Literacy practices growth over short periods of time *is*, on the other hand, directly affected by program participation
- These findings are reinforced by cross-sectional research (e.g., Smith & Sheehan-Holt) and by classroom studies (e.g., Purcell-Gates, Jacobson & Degener)

Literacy Proficiency Development

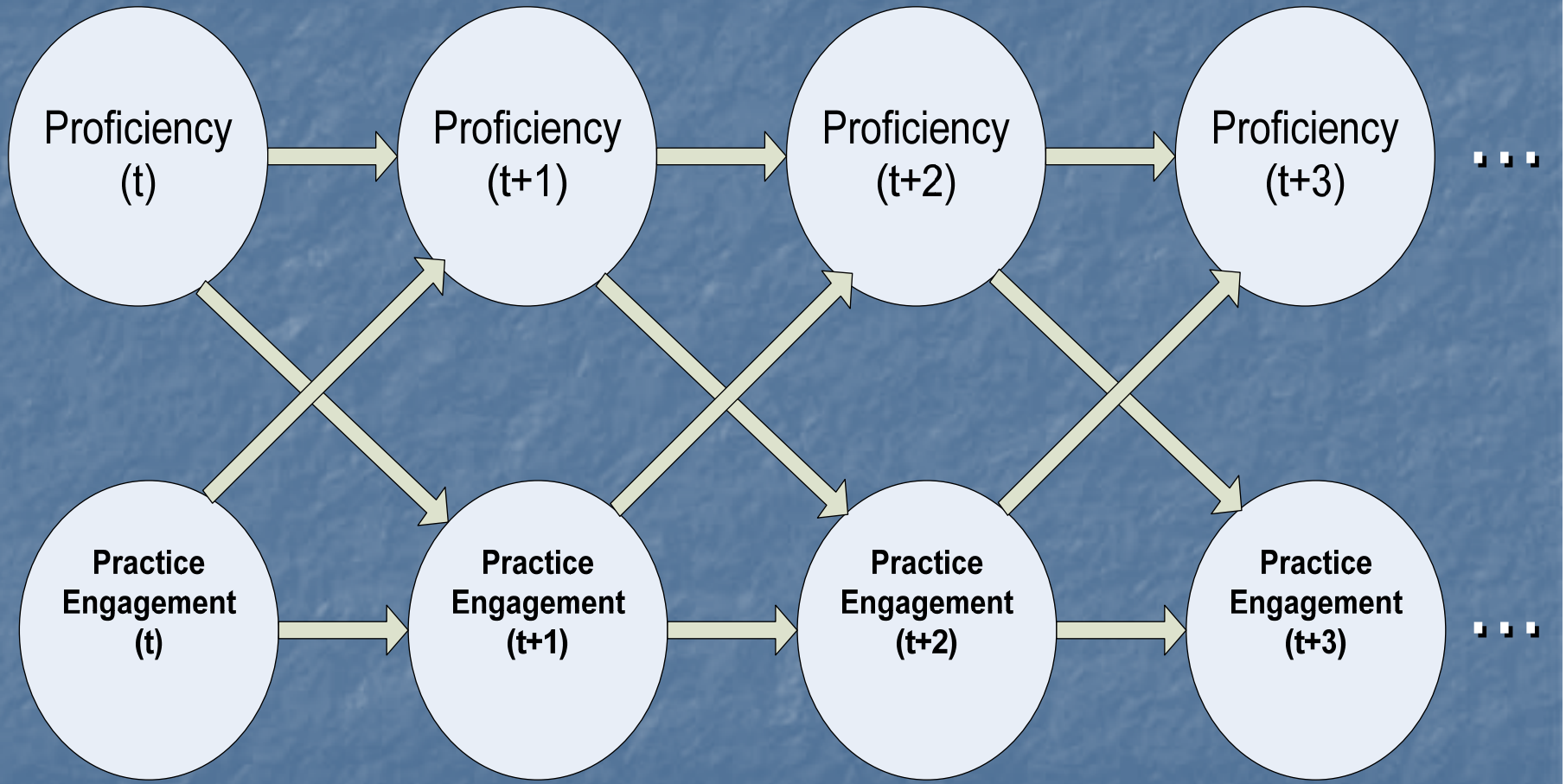


(Participation = 100+ hours)

Practice Engagement Theory

- Highlights the importance of everyday literacy practices for connecting culture and context to proficiency development
- Shows how instructional programs, which research indicates have short-term effects on literacy practices, can have longer-term effects on proficiency growth
- Provides a framework for understanding how everyday literacy practices, instructional programs and proficiencies mutually influence each other

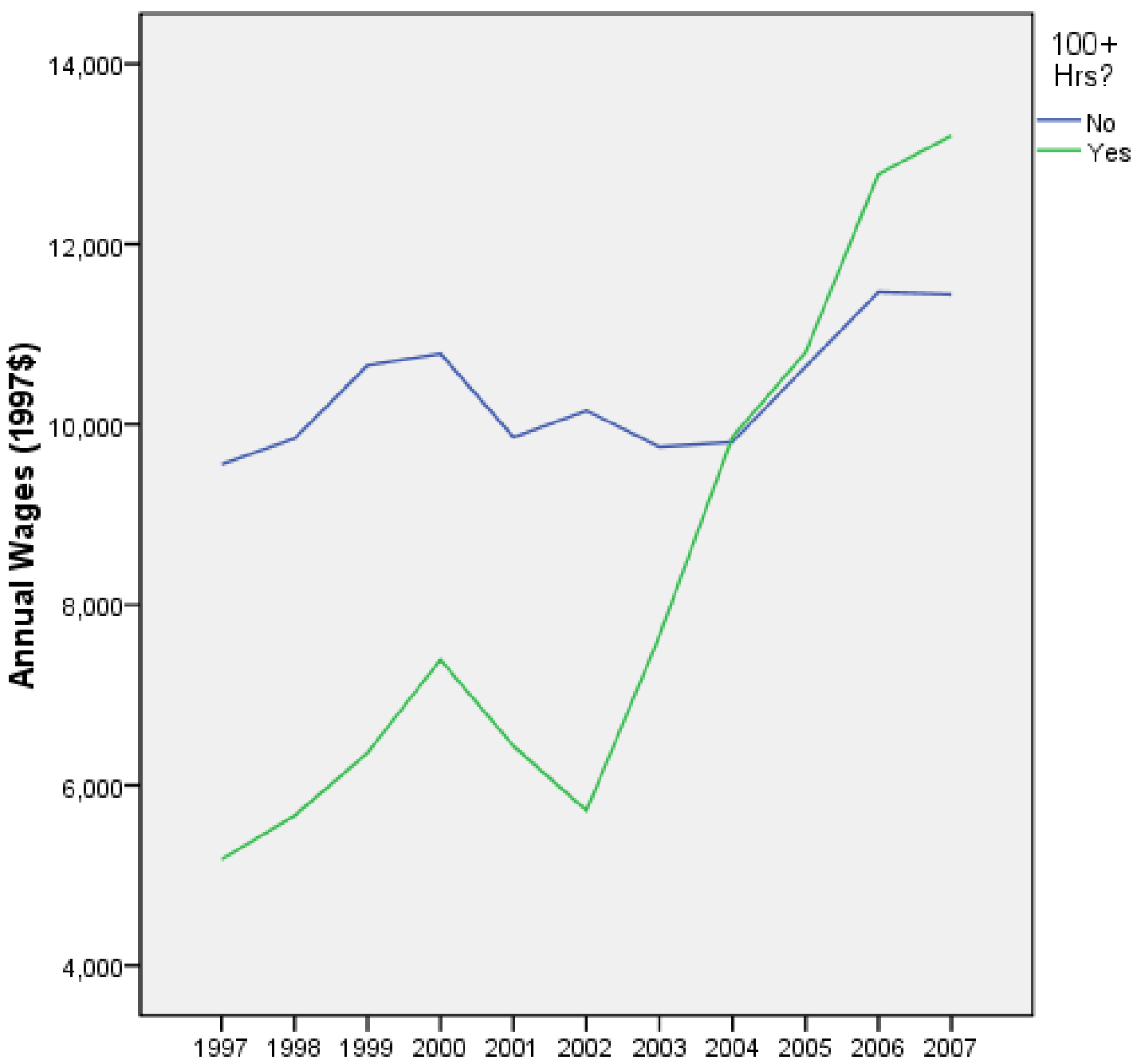
Practice Engagement Theory



"Use It or Lose It"

"Practice Makes Perfect"

"No Pain, No Gain"


Annual Wages (1997$)
14,000
12,000
10,000
8,000
6,000
4,000
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
100+ Hrs?
No
Yes

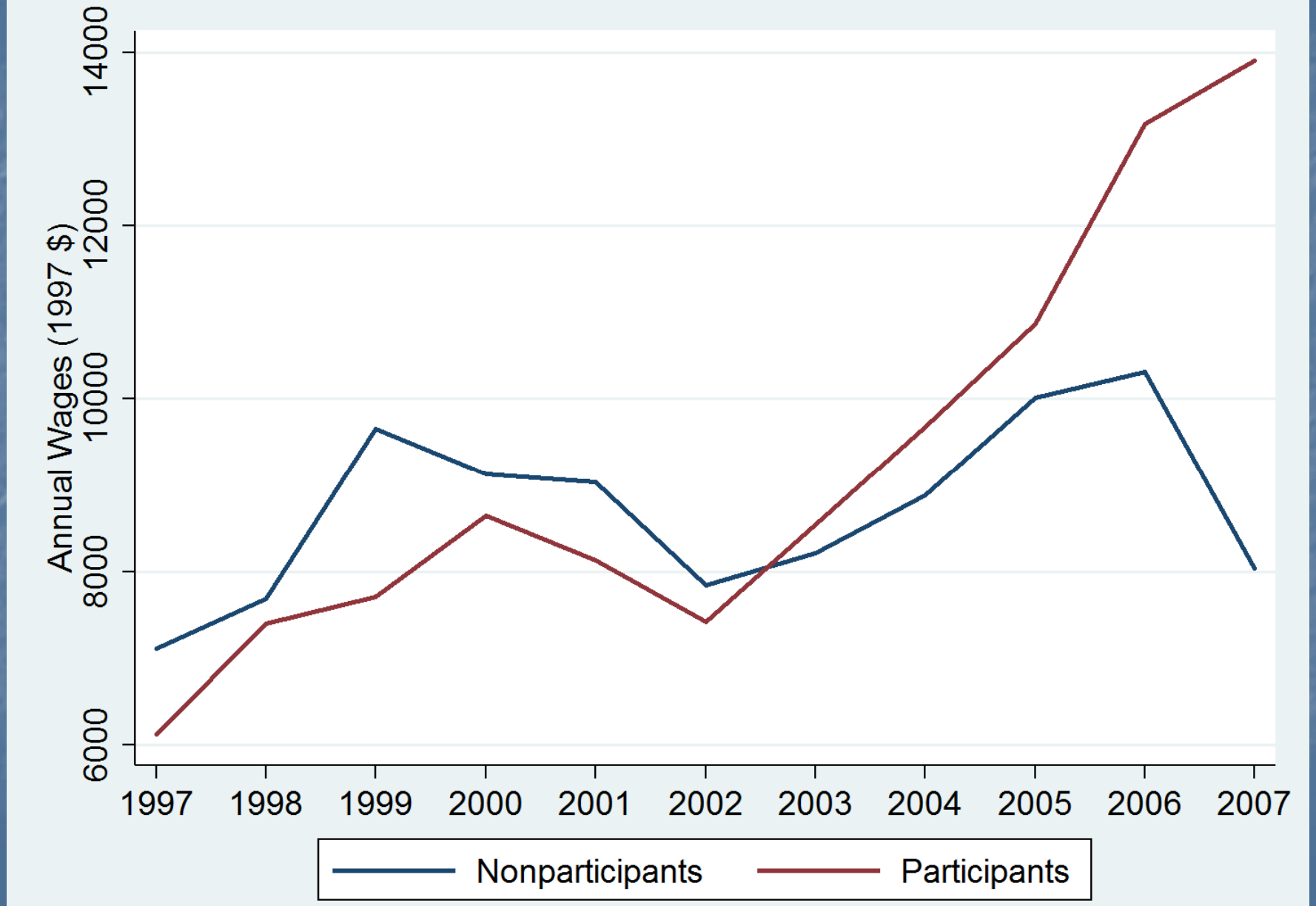
Estimating Participation Impact

- Adults decide whether to participate in basic skills programs, so participants and nonparticipants are not usually comparable (*selection bias*)
- Several analytical methods can be used to address selection bias in comparing program participants & nonparticipants:
  - Treatment effects (propensity score matching)
  - Difference-in-differences (propensity score matching)
  - Fixed effects panel regressions

Propensity Score Matching

- Compares participants and nonparticipants matched on their likelihood of participating based on *observed pre-participation* characteristics:
  - Age Gender Race/Ethnicity Education
  - Immigration status Income
  - Learning disabilities Parents' education

Income Growth in Propensity Score-Matched Participants (100+ hours) & Nonparticipants



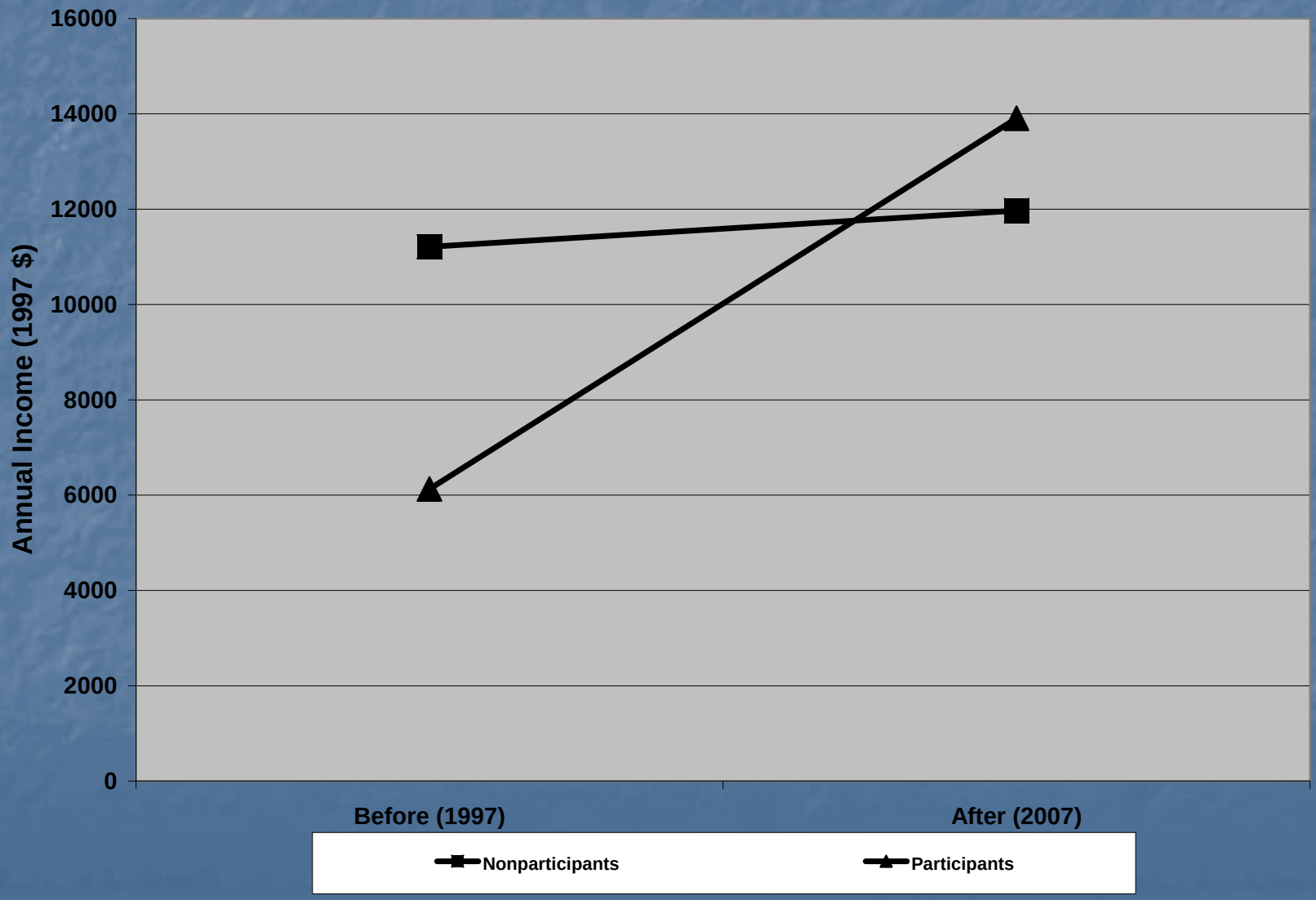
Treatment Effects Model

- Estimates average treatment effect on treated by comparing 2007 incomes of matched participants and nonparticipants
- With participation defined as *any* amount of attendance, there is no significant difference between groups
- With participation defined as *25 or more hours* of attendance, there is no significant difference between the groups' 2007 incomes
- With participation defined as *75 or more hours* of attendance, there is a nearly significant (p=0.053) difference between the groups' 2007 incomes
- With participation defined as *100 or more hours* of attendance, there a statistically significant difference: participants average $9,621 *more* in annual income over what they would have received if they had not participated (in 2013 USD)

Difference-in-Differences (DID) Model

- Compares income changes over a decade (1997-2007) between matched participants and nonparticipants
- There is no statistically significant DID between groups if participation is defined as *any* amount of attendance
- If participation is defined as *100 or more hours* of attendance, there is a statistically significant DID
- Despite different statistical assumptions, estimates 2007 incomes to average $10,179 more because of participation, comparable to the treatment effects estimate of $9,621 (in 2013 USD)

Difference-in-Differences



Fixed Effects Panel Regression Model

- Within-subject models of year-to-year variations in income in relation to year-to-year program participation and other life events
- Eliminates selection bias due to observed *and* unobserved time-invariant individual characteristics
- Reveals how temporal details of participation -- intensity, duration and elapsed time – are reflected in observed changes in economic status

Fixed Effects Panel Regression (con't)

- Results consistent with other models
- Only when participation involves about 100 or more hours of attendance does it have a significant & substantial impact on future earnings
- Concentrated hours have a larger impact on earnings than hours distributed over years
- The impact of participation on earnings takes several years to develop after program exit

Summary: Impact of Participation on Earnings

- Multiple methods of controlling for selection bias all indicate that participation in LLN programs has a significant positive impact on adults' future earnings
- The significance of the impact requires a minimum amount of program attendance, about 100 hours in the LSAL data
- The earnings premium grows over time and becomes substantial 5-6 years after program exit: the annual premium was nearly half (0.45) a standard deviation of 2007 incomes
- The impact of participation is not at all evident in short-term follow-ups to program participation
- Post-program learning, proficiency growth, and postsecondary education and training may all play a role mediating the continuing impact of participation on labor market outcomes

Key Points

- For both literacy proficiency and earnings outcomes, our longitudinal research clearly shows programs are having long-term beneficial effects that are NOT evident in short-term accountability measures being used
- Programs are thus evaluated with measures that don't reflect their actual impact, often measures they must use for program improvement

Contrasting Metaphors of Adult LLN Programs

- The program-centric “Parking Lot”
- The learner-centric “Busy Intersection”

Photo courtesy Dee Mcrae

Photo courtesy Dee Mcrae

"Parking Lot"

- Recruit students
- Fill seats & retain students
- Programs provide *services* to students
- The longer students stay, the more they learn
- Pathways are within program
- Short-term *proficiency* gains are emphasized

"Busy Intersection"

- Adults come to programs along different life pathways
- Programs are *resources* used by active learners
- How long students stay may not matter as much as the directions and tools they exit with
- Increased engagement in *literacy practices* is emphasized

Implications for Program Design

- Recall that LSAL is not a study of what happens inside programs as much as how program participation happens as part of learners' lives
- Program design should..
  - help connect periods of "self study" with periods of classroom participation too often fragmented by life circumstances
  - support lifelong and life-wide learning trajectories beyond the classroom, not just learning in classrooms
  - prioritize engaging students in sustainable literacy & numeracy practices
  - utilize *learning support systems* that provide personalized, portable lifelong and life-wide *learning plans* that learners can access in classrooms and other contexts, around which support services are wrapped and provision is coordinated

Policy Implications

- Develop and use measures of engagement in literacy practices in diverse life contexts as part of program evaluation & accountability
- Gather data and build accountability and return-on-investment frameworks around *longer-term* outcomes
- Don't focus exclusively on short-term proficiency test score gains: this is *not* a useful logic model of program impact
- Fund provision that supports engagement in literacy and numeracy practices in varied settings - e.g., workplace, health care, community settings

A Space for Innovation

- The many suggested innovations in program design and policy will be best developed in an environment that encourages experimentation & evaluation of new approaches
- Practitioners must serve as expert partners and stakeholders in all phases of system development & implementation

Thank You!

- Special thanks to Clare Strawn, Cynthia Lopez, many LSAL staff & graduate students, and especially the 1,000 adults who shared their lives

- For more information:
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