

Sinking or swimming

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English Language Learner Programs

- 11% of K-12 students in the US are in ELL
- 26% in CA
- 17% in TX
- 49% in LA Unified
- 33% in Dallas Independent School Dist
- 35% in Denver County

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Types of education

- Bilingual
 - Instruction in native language
- English immersion
 - Little instruction in native language
- ESL classes taught in both methods
- In the LUSDiNE (large urban school district in the Northeast), ESL students get 3 hours of English instruction/week

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Bilingual history

- Common place in 1800s
- Lost favor at start of WWI and large wave of immigrants to the US
- Mid 1920s, 34 states mandated English only instruction K-12
- Bilingual Ed Act of 1968 -- provided direct funding to districts to provide BE

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- 1974 Supreme Court, Lau vs Nichols, nt equal treatment if students cannot understand instruction if they do not speak English
- Lau remedies, requiring all schools w/ 20% LEP to develop remedies
- Federal support for bilingual education has declined since Reagan Admin.

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- NCLB eliminated direct grants to districts, decreased emphasis on own language
- State laws eliminated bilingual
 - CA referendum in 1998 elim. Bilingual but parents can petition
 - Similar laws in other states

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- Ronald Reagan in 1981
- “It is absolutely wrong and against American concepts to have a bilingual education program that is now openly, admittedly dedicated to preserving their native language and never getting them adequate in English...”

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Research question

- Do kids in BE do better than ones in EI?
- Problem, kids in EI are a non-random selection of children
- Within school district
- $Y_i = X_i\beta + BE_i \gamma + \varepsilon_i$
- $Cov(BE_i, \varepsilon_i) > 0$

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Table 1:
Sample Means of Selected Student Characteristics
by Program Participation One Year after LAT

Variable Name	Full Sample	All Students		Students Receiving ELS			
		ELS	No ELS	Diff.	Bilingual	ESL	Diff.
<i>Following year outcomes</i>							
Reading z-score	-.627 (.003)	-.872 (.003)	-.227 (.004)	-.635 (.005)	-.949 (.005)	-.815 (.004)	-.134 (.006)
Math z-score	-.432 (.002)	-.611 (.003)	-.07 (.004)	-.541 (.005)	-.602 (.004)	-.622 (.004)	.02 (.006)
Promoted	.914 (.001)	.901 (.001)	.946 (.001)	-.045 (.002)	.893 (.002)	.908 (.001)	-.015 (.002)

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Variable Name	Full Sample	All Students			Students Receiving ELS		
		ELS	No ELS	Diff.	Bilingual	ESL	Diff.
<i>Baseline characteristics</i>							
Female	.478 (.001)	.477 (.001)	.482 (.002)	-.004 (.005)	.499 (.002)	.461 (.002)	.038 (.003)
Age	11.922 (.005)	12.098 (.004)	11.471 (.011)	.622 (.011)	12.034 (.009)	12.137 (.008)	-.103 (.012)
Asian	.154 (.001)	.144 (.001)	.141 (.002)	-.037 (.002)	.148 (.001)	.149 (.001)	-.001 (.002)
Hispanic	.706 (.001)	.731 (.001)	.699 (.002)	.032 (.002)	.912 (.001)	.595 (.001)	.318 (.002)
Black	.066 (.001)	.053 (.001)	.064 (.001)	-.011 (.001)	.028 (.001)	.072 (.001)	-.044 (.001)
White	.883 (.001)	.871 (.001)	.115 (.001)	-.045 (.002)	.81 (.001)	.118 (.001)	-.108 (.001)
Free/Red. Lunch	.966 (.001)	.989 (.001)	.958 (.001)	.031 (.001)	.978 (.001)	.963 (.001)	.012 (.001)
Foreign born	.475 (.001)	.485 (.001)	.43 (.002)	.083 (.003)	.422 (.002)	.494 (.003)	-.032 (.003)
Home Lang = Spanish	.698 (.001)	.731 (.001)	.812 (.002)	.119 (.002)	.916 (.001)	.592 (.002)	.325 (.002)

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LUSDINE

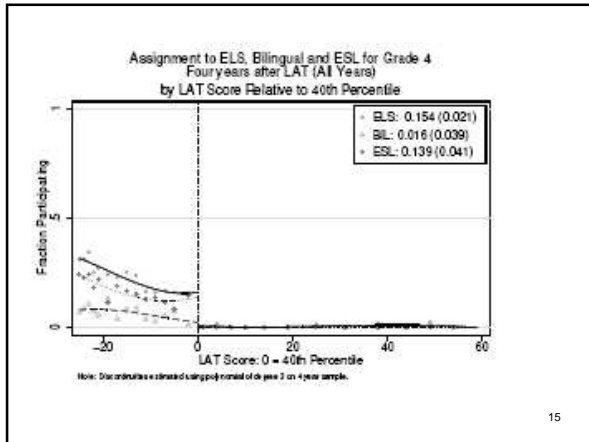
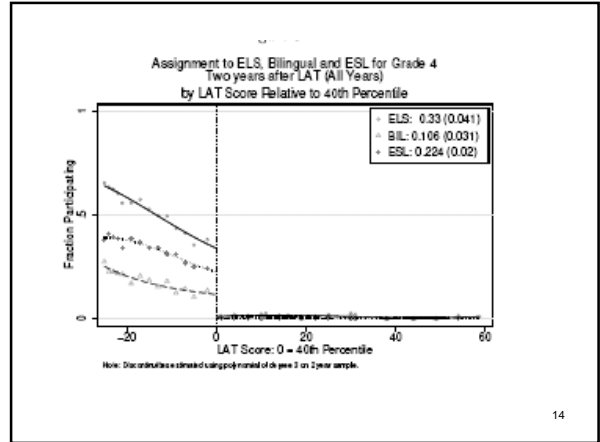
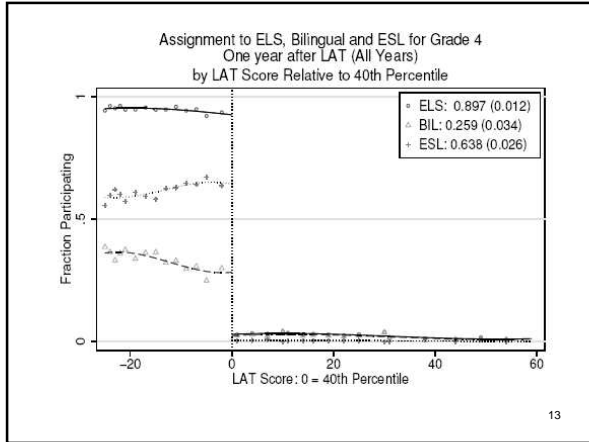
- When enter school, parents complete survey about language at home
- Non-English speakers given Language Assessment Test (LAT)
 - Scores normed to native speakers
- 40%ile or below defined as LEP, placed into bilingual education

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Strategy

- Kids just over/under 40th percentile are functionally identical
- Exploit the smoothness in outcomes over the LAT
- We see a large change in treatment for people who are similar
- If treatment impacts outcomes, we should see a discontinuity there as well

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Basic RD model

- Equation of interest
- $$Y_{ij} = D_j \beta_0 + h(x_j) + D_j h(x_j) + X_i \gamma + \varepsilon_{ij}$$
- x takes on discrete values $[x_1 \dots x_k]$
- $x_k = 0$ (rescaled) at discontinuity
- $D_j = 1[x_j > 0]$
- $h(x_j)$ polynomial in x

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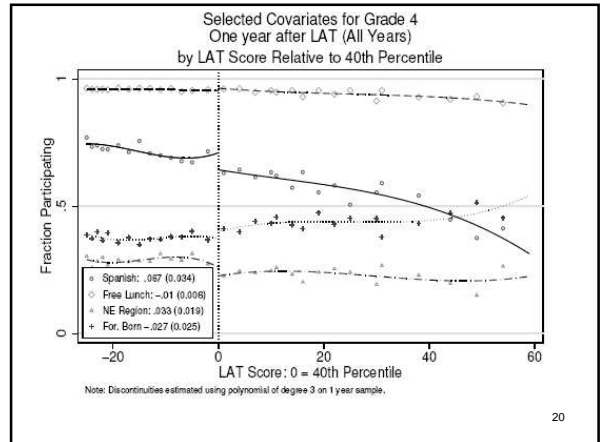
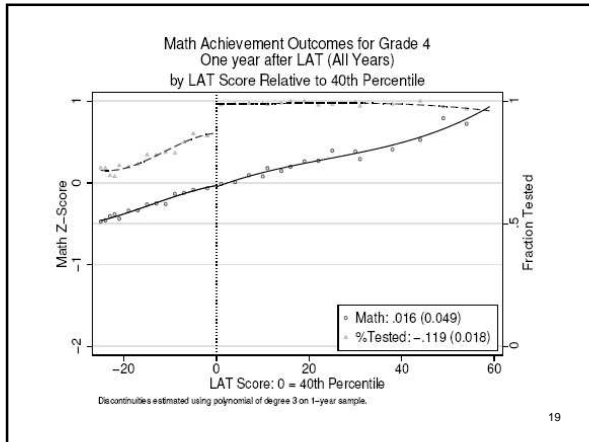
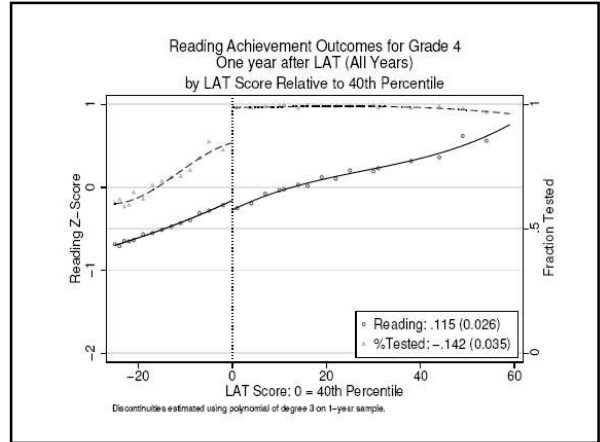
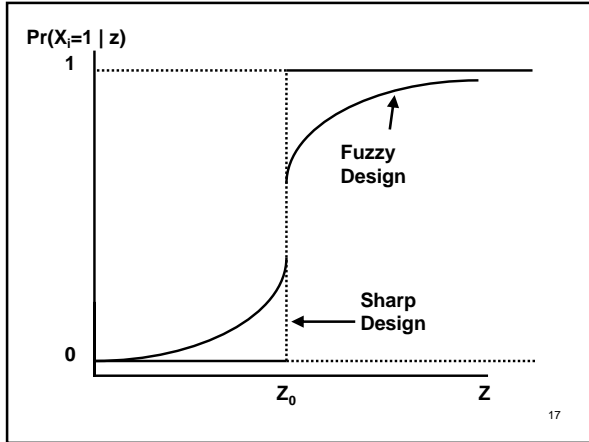


Table 3:
The Effect of Eligibility on Participation English Language Services
by Grade, Year, and Program Type - One year after LAT Test

Without x				With x			
Grade	ELS	1998		Grade	n.a.	n.a.	n.a.
		Bil.	ESL				
Grade 3	n.a.	n.a.	n.a.	Grade 3	n.a.	n.a.	n.a.
	(-)	(-)	(-)		(-)	(-)	(-)
Grade 4	.92	.358	.562	Grade 4	.915	.317	.598
	(.014)	(.06)	(.055)		(.014)	(.058)	(.054)
Grade 5	.918	.531	.388	Grade 5	.912	.47	.443
	(.084)	(.088)	(.088)		(.083)	(.078)	(.083)
Grade 6	.944	.286	.658	Grade 6	.940	.26	.681
	(.083)	(.047)	(.029)		(.028)	(.038)	(.03)
Grade 7	.917	.266	.651	Grade 7	.923	.277	.646
	(.053)	(.036)	(.054)		(.055)	(.049)	(.045)
Grade 8	.869	.243	.626	Grade 8	.871	.154	.717
	(.018)	(.028)	(.017)		(.02)	(.028)	(.021)
All Grades	.906	.279	.625	All Grades	.907	.237	.681
	(.01)	(.019)	(.014)		(.01)	(.018)	(.015)

The Effect of ELS Eligibility on
Reading Score Outcomes and the Probability of Being Tested
One year after LAT Test

Grade	1998		Grade	n.a.	n.a.
	z-score	tested			
Grade 3	n.a.	n.a.	Grade 3	n.a.	n.a.
	(-)	(-)		(-)	(-)
Grade 4	-.023	-.215	Grade 4	.022	-.236
	(.076)	(.043)		(.067)	(.045)
Grade 5	-.257	-.232	Grade 5	-.158	-.306
	(.118)	(.058)		(.131)	(.052)
Grade 6	.247	-.103	Grade 6	.252	-.083
	(.084)	(.04)		(.085)	(.042)
Grade 7	.126	-.109	Grade 7	.129	-.14
	(.223)	(.084)		(.123)	(.071)
Grade 8	.079	-.081	Grade 8	.106	-.116
	(.23)	(.034)		(.186)	(.031)
All Grades	.039	-.135	All Grades	.082	-.159
	(.049)	(.02)		(.044)	(.019)

Table 5:
The Effect of ELS Eligibility on
Math Score Outcomes and the Probability of Being Tested
One year after LAT Test

Grade	1998		Grade	n.a.	n.a.
	z-score	tested			
Grade 3	n.a.	n.a.	Grade 3	n.a.	n.a.
	(-)	(-)		(-)	(-)
Grade 4	.018	-.133	Grade 4	.07	-.16
	(.109)	(.04)		(.086)	(.038)
Grade 5	-.157	-.166	Grade 5	.022	-.23
	(.1)	(.087)		(.107)	(.073)
Grade 6	.213	-.208	Grade 6	.172	-.2
	(.115)	(.055)		(.093)	(.054)
Grade 7	-.048	-.104	Grade 7	.032	-.115
	(.109)	(.064)		(.118)	(.049)
Grade 8	-.321	-.05	Grade 8	-.106	-.114
	(.104)	(.016)		(.167)	(.036)
All Grades	-.073	-.075	All Grades	.067	-.148
	(.048)	(.014)		(.047)	(.02)