

Cultivating a Robust and Diverse Special Educator Workforce

Tuan D. Nguyen
University of Missouri
Tuan.Nguyen@missouri.edu

The National Association of Special Education Teachers 2026

A little bit about me

- Taught middle and high school for 7 years
- Study education policy and teacher labor markets, with emphasis on special education teachers
- A key part of my work is to examine teacher shortages nationally (www.teachershortages.com) and the existing conditions of the special educator workforce

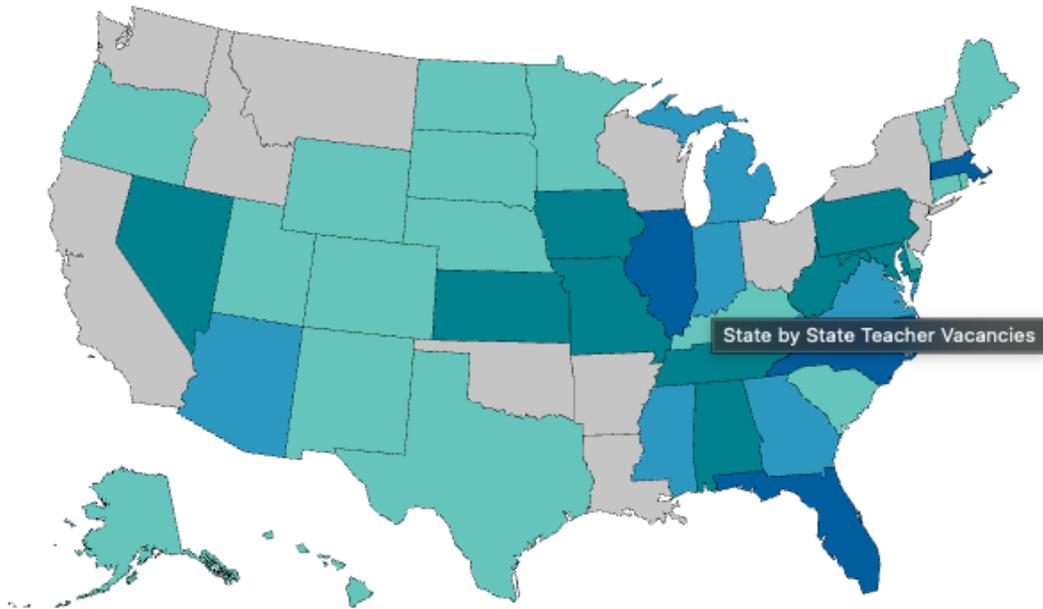
What do we know about teacher shortage?

- Consist of vacancy and underqualification

Teacher Vacancy



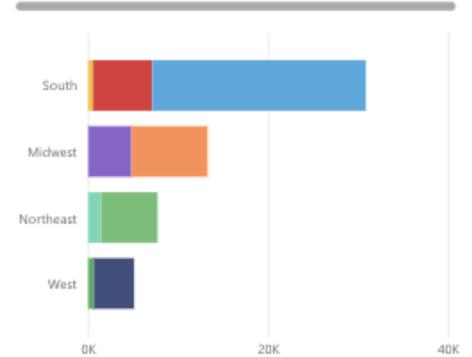
State by State Teacher Vacancies



Map Legend ● 1-999 ● 1000-1999 ● 2000-2999 ● Above 3000

Notes: ~ denotes an approximation, + denotes a subtotal of vacancies, - denotes teacher openings instead of vacancies, ^ denotes data from a federal source for lacks of data in the state-specific source.

Region	Division	Vacancies
South	South Atlantic	23,747.80
Midwest	East North Central	8,470.00
South	East South Central	6,564.00
Northeast	New England	6,258.30
Midwest	West North Central	4,792.77
West	Mountain	4,476.20
Northeast	Mid-Atlantic	1,448.00
West	Pacific	617.00
South	West South Central	546.00
Total		56,920.07



Vacancy Data Source (click to go)

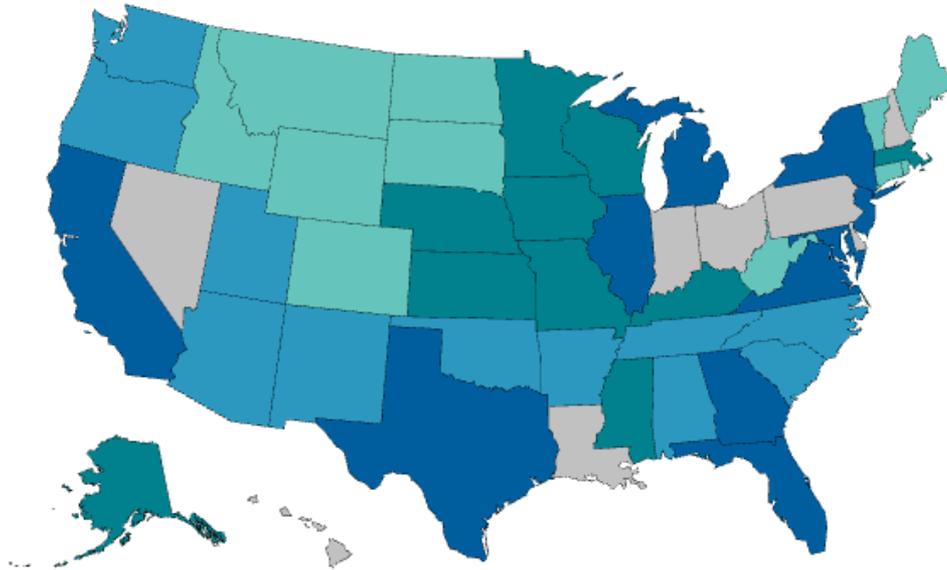
<http://www.sai-iowa.org/2023-24StaffSho...>

Teacher Underqualification

Underqualification



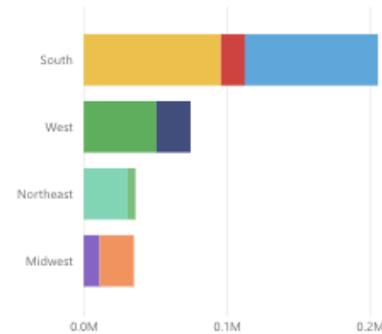
State by State Underqualified Teacher Hires



Underqualification Quartile ● First Quartile ● Second Quartile ● Third Quartile ● Fourth Quartile

Notes: An underqualification is a position assumed by an individual who does not fully meet the state's qualification requirements for that specific position, including those who are qualified but not for the specific position they hold (i.e., out-of-field teachers).

Region	Division	Underquals
South	West South Central	95,955.70
South	South Atlantic	92,960.94
West	Pacific	50,924.66
Northeast	Mid-Atlantic	30,700.00
Midwest	East North Central	23,907.60
West	Mountain	23,833.08
South	East South Central	16,769.48
Midwest	West North Central	11,220.02
Northeast	New England	5,535.76
Total		351,807.24

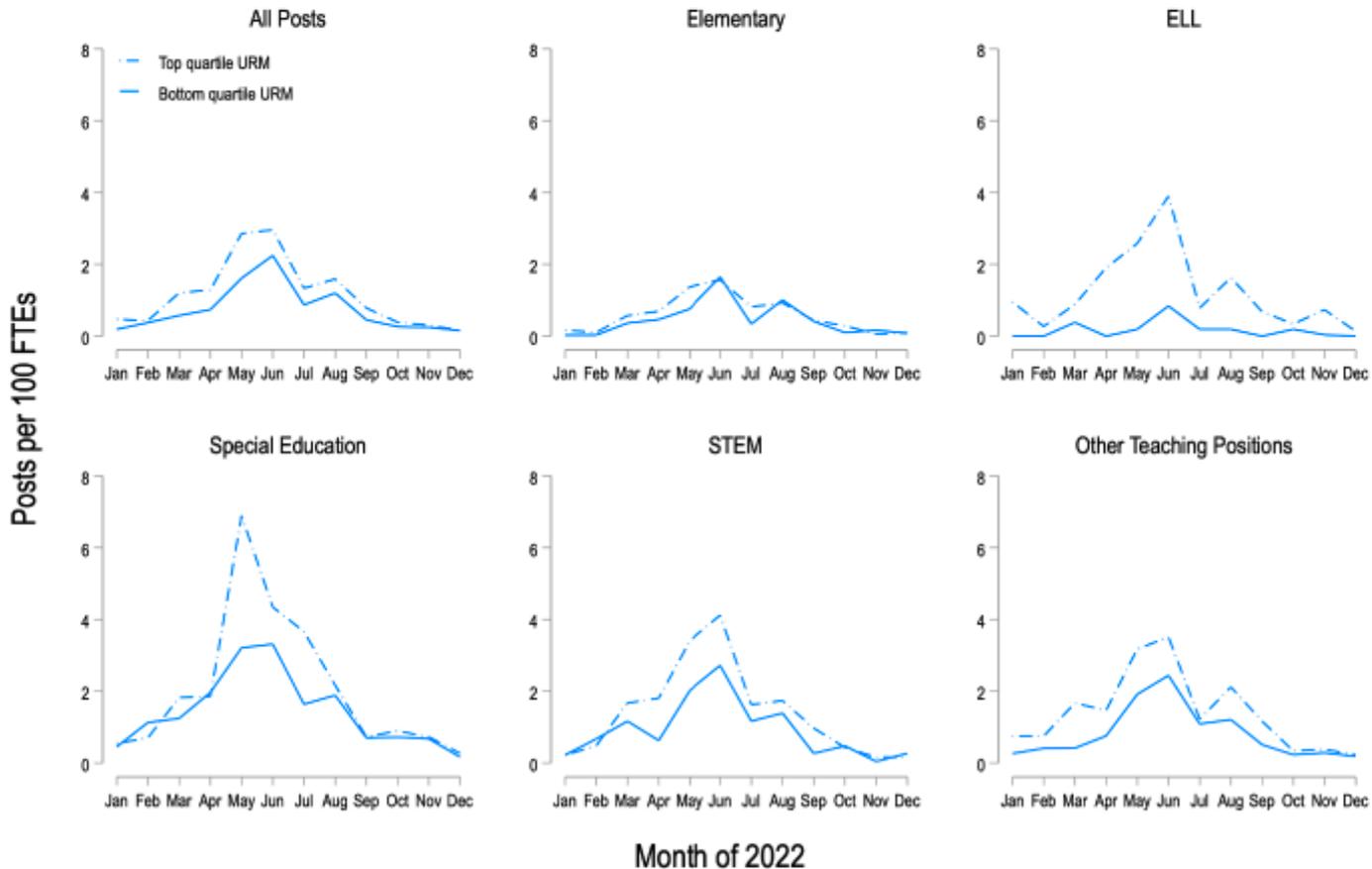


Underqualification Data Source (click to go)

<https://azreportcards.azed.gov/state-reports>

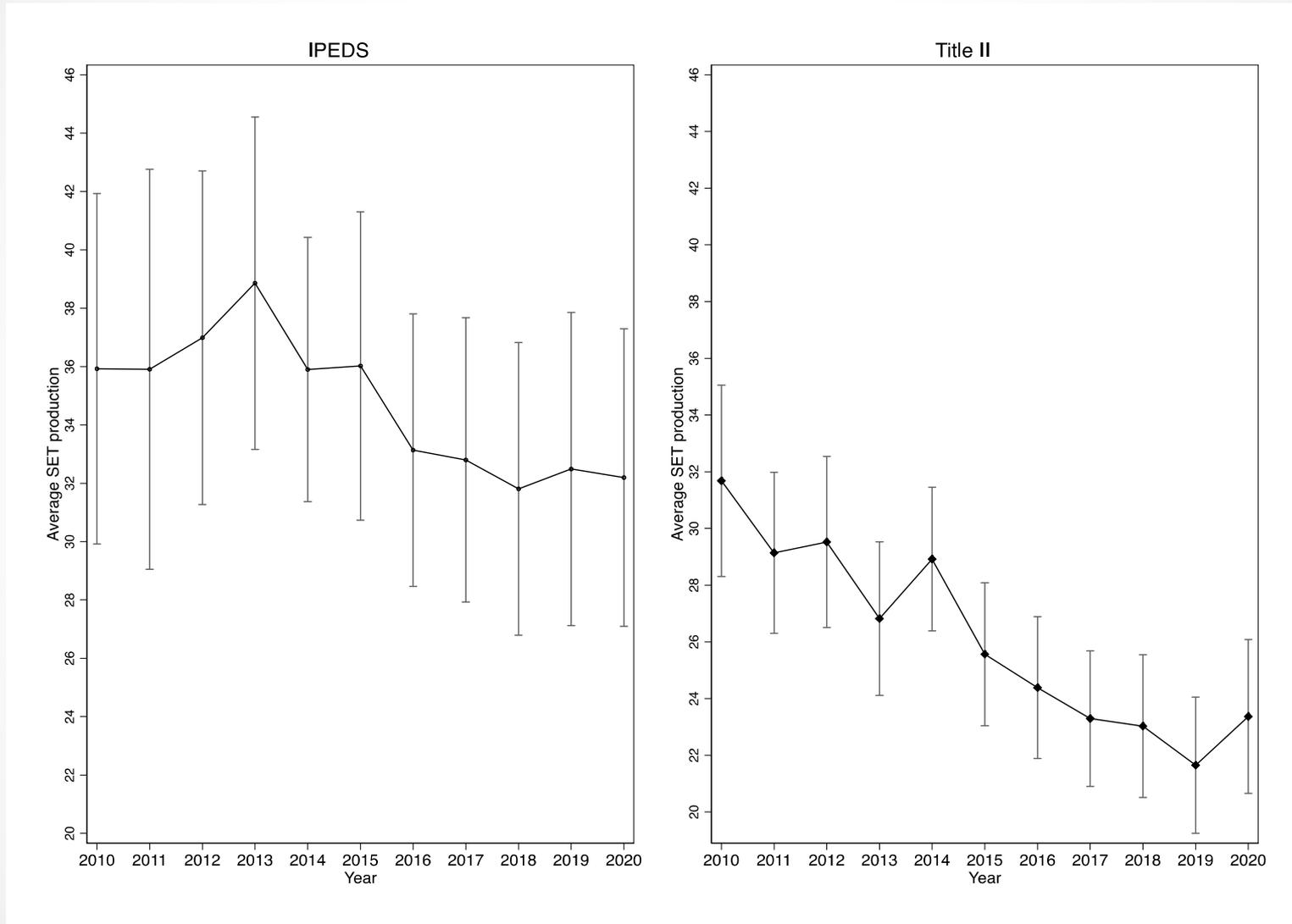
Teacher Job Postings

Figure 3. Subject-specific monthly new posts per 100 subject FTE, by URM quartile



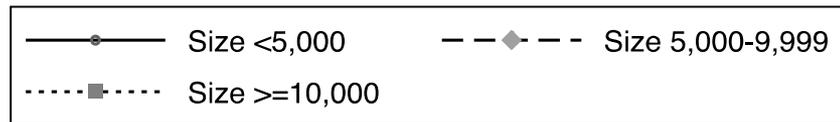
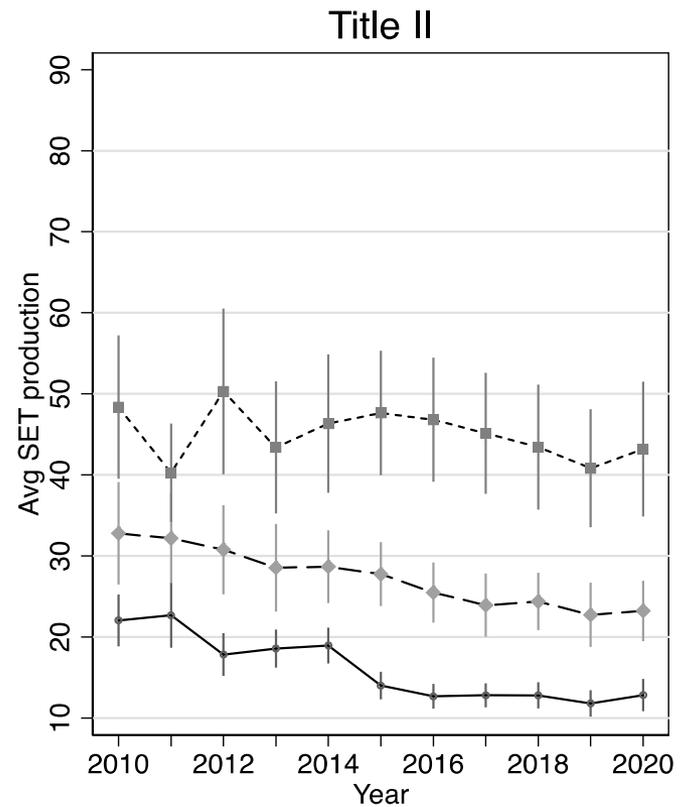
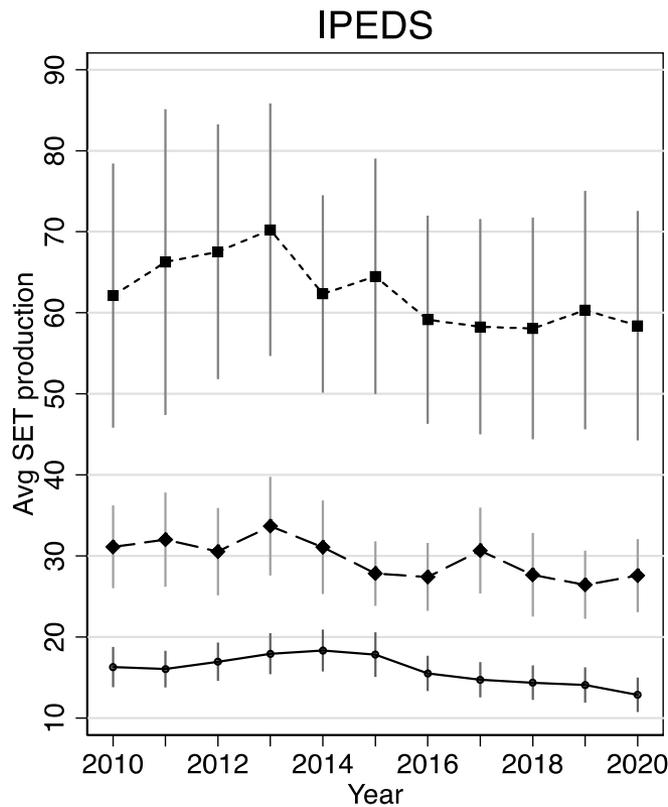
Notes: Dashed and solid lines above represent group averages of new postings by month for schools within the fourth (highest) and first (lowest) quartiles of school percent under-represented minority, respectively. We scale new posting volume by total full-time equivalent teachers in that school as of October 1, 2021.

Supply of New Special Education Teachers



Average Number of New Special Education Teachers at Accredited Institutions

Differences in the Supply of New Special Education Teachers by Institutional Size



Special Educator Workforce and Diversity

- The current teacher workforce is predominantly White
- The proportion of teachers of color has been insufficient to keep pace with increasing pop of students of color
- Students of color have improved short- and long-term outcomes with teachers of color
- These disparities are growing over time despite policy attention, even before changes due to the Trump administration
- The gaps are especially pronounced in special education as students of color are overrepresented in special education

A tool to project future needs

- The Future Parity Index Estimator (FUPI) to project magnitude of change needed to yield significant progress towards an ethnoracially representative teacher workforce
- To reach parity indices of 50% by 2030, what would we need
 - (a) Newly prepared SETs to be SETs of color?
 - (b) Newly prepared SETs of color to enter the workforce?; and
 - (c) SETs of color in the workforce to be retained?

Data & Method (I)

- We leverage three comprehensive national data sources:
 - OSEP data providing aggregate counts of students by race/ethnicity in special ed programs
 - Title II data providing annual production of potential teachers who completed teacher preparation programs
 - SASS/NTPS data providing teacher demographics and characteristics nationally

Data & Method (II)

- $ParityIndex = \frac{\text{Number of racially minoritized SETs/number of SETs}}{\text{Number of racially minoritized SWDs/Total SWDs}}$
- $MinSETneeded_{t+k} \leq ExistingMinSET_t + \sum_{i=1}^k \gamma\alpha\beta NewSET_{it} + \sum_{i=1}^k \Delta MinSETs_{it}$
 - γ , the percent of new teachers who are people of color
 - α , the percent of teachers who join the profession after obtaining certification
 - β , the percent of this group staying in the profession, and
 - $\Delta MinSETs$ represent changes in the number of SETs of color
- $MinSETneeded = \frac{\text{Minoritized SWDs}}{\text{Total SWDs}} \times \text{Number of SETs} \times \text{Parity index}$

Main Idea

- Since we are able to calculate *MinSETneeded*, we are then able to manipulate the variables on the right-hand side to see how we can reach the needed number of SETs of color.
- Specifically, we can explore how different values of incoming SETs (*NewSET*), the percent who are teachers of color (γ), the percent who join the profession (α), the percent staying in the profession (β), and changes to the number of SETs of color ($\Delta MinSETs$) would be equal to or greater than the desired number of SETs of color (*MinSETneeded*).

Leverage points to cultivate SET workforce

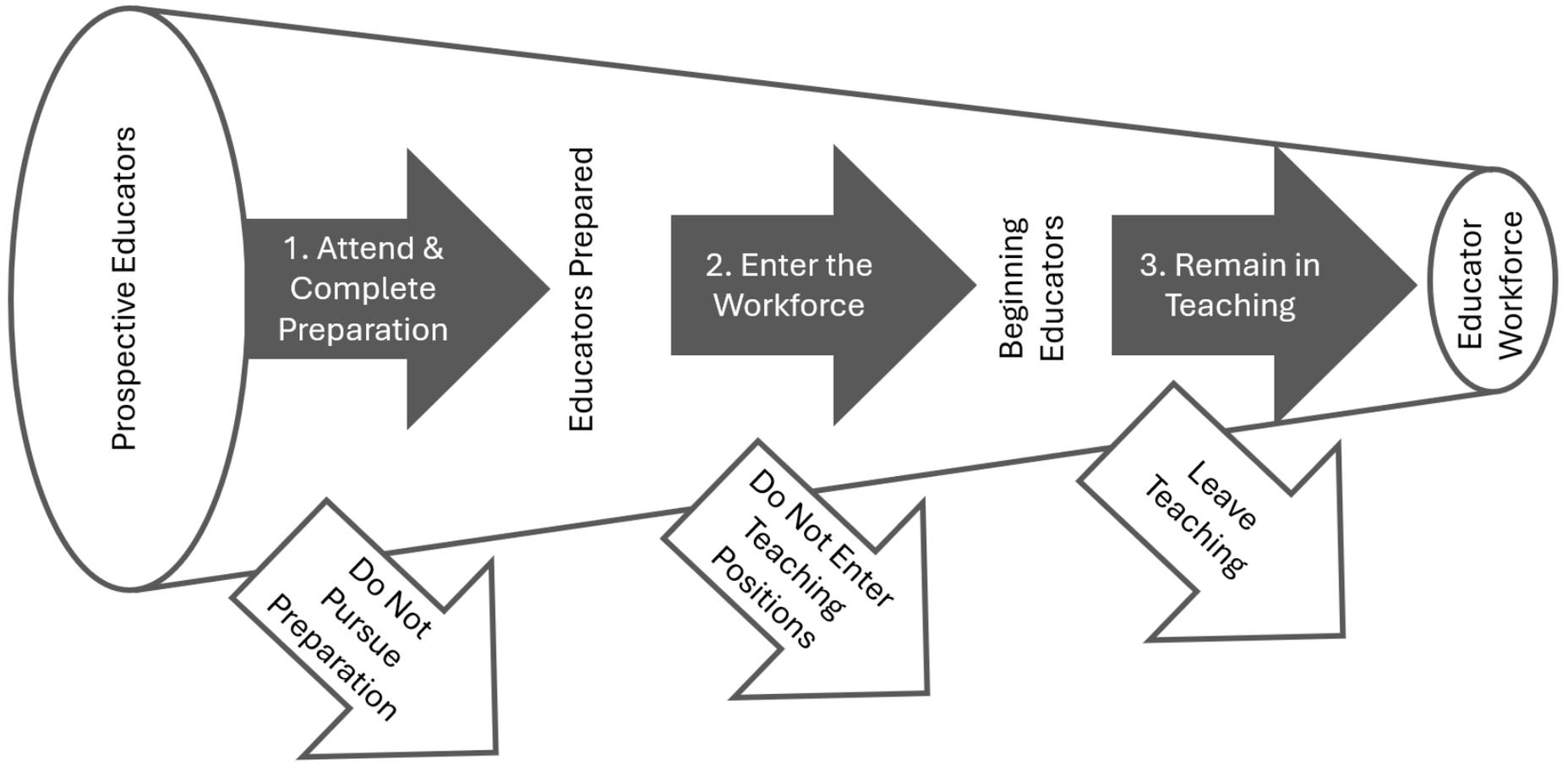


Table 1. Estimates of the special education teacher workforce by 2030

Year (fall)	Minoritized special education teachers (OSEP and SASS/NTPS)	Special education teachers (OSEP)	Minoritized students with disabilities (OSEP)	Students with disabilities (OSEP)	Newly prepared special education teachers (Title II)
2011	60050	364628	2685764	5682406	31296
2012	58340	353655	2762474	5724060	33416
2013	62570	378614	2855253	5808788	32264
2014	56260	339833	2953617	5919689	32049
2015	58670	353801	3022078	5920667	29822
2016	58080	341695	3127252	6012903	29859
2017	64220	367175	3247584	6198680	30061
2018	68140	392655	3423309	6440599	30610
2019	71390	414314	3526873	6597170	30208
2020	76170	444901	3648442	6774050	32907
2021	71940	410985	3720006	6775396	30511
2022	73510	417024	3828141	6896758	30376
2023	75110	423064	3936276	7018121	30242
2024	76720	429103	4044411	7139484	30108
2025	78370	435142	4152546	7260846	29974

Main Assumptions Under Consideration

- Changes to existing minority SET workforce
- Changes to number of new teachers completing trad and alt cert programs
- % of new teachers who are teachers of color
- % of newly teachers entering the workforce right away
- 5 year retention rate

Table 4. Future Parity Index Estimation Using 2025 as Baseline: Parity Index 0.50

Assumption 1: Changes to existing minority SET workforce ($\Delta MinSET$)	Assumption 2: Changes to number of new teachers (trad and alt cert programs)	Assumption 3: % New teachers who are teachers of color	Assumption 4: % of Newly prepared SETs entering workforce	Assumption 5: five-year retention rate	Minority SETs needed for 50% parity by 2030	Number of minority SETs by 2030
Lose 5000 minority SETs per year	35,000 new SETs prepared every year	60%	90%	90%	138792	138418
				80%	138792	128968
				70%	138792	119518
			80%	90%	138792	128968
				80%	138792	120568
				70%	138792	112168
			70%	90%	138792	119518
				80%	138792	112168
				70%	138792	104818
		50%	90%	90%	138792	124243
				80%	138792	116368
				70%	138792	108493
			80%	90%	138792	116368
				80%	138792	109368
				70%	138792	102368
			70%	90%	138792	108493
				80%	138792	102368
				70%	138792	96243
			90%	90%	138792	110068
				80%	138792	103768

Lose 5000 minority SETs per year	40,000 new SETs prepared every year	60%	90%	90%	138792	150568
			90%	80%	138792	139768
				70%	138792	128968
				80%	90%	138792
			80%		138792	130168
			70%		138792	120568
			70%	90%	138792	128968
				80%	138792	120568
				70%	138792	112168
		50%	90%	90%	138792	134368
				80%	138792	125368
				70%	138792	116368
			80%	90%	138792	125368
				80%	138792	117368
				70%	138792	109368
			70%	90%	138792	116368
				80%	138792	109368
				70%	138792	102368
		40%	90%	90%	138792	118168
				80%	138792	110968
				70%	138792	103768
			80%	90%	138792	110968
				80%	138792	104568
				70%	138792	98168
			70%	90%	138792	103768
				80%	138792	98168
				70%	138792	92568

Lose 2500 minority SETs per year	40,000 new SETs prepared every year	60%	90%	90%	138792	163068
				80%	138792	152268
				70%	138792	141468
			80%	90%	138792	152268
				80%	138792	142668
				70%	138792	133068
			70%	90%	138792	141468
				80%	138792	133068
				70%	138792	124668
		50%	90%	90%	138792	146868
				80%	138792	137868
				70%	138792	128868
			80%	90%	138792	137868
				80%	138792	129868
				70%	138792	121868
			70%	90%	138792	128868
				80%	138792	121868
				70%	138792	114868
		40%	90%	90%	138792	130668
				80%	138792	123468
70%	138792			116268		
80%	90%		138792	123468		
	80%		138792	117068		
	70%		138792	110668		
70%	90%		138792	116268		
	80%		138792	110668		
	70%		138792	105068		

What have we learned?

- In sum, to reach just 50% parity between 2025 and 2030, we would need to:
 1. Lose at most 2,500 (~3% of current SET workforce) minority SETs per year (8% leave nationally)
 2. Have at least 40,000 new SETs prepared each year (currently about 30,000 prepared each year)
 3. At least 50-60% of these new teachers are teachers of color (currently ~18% of SETs are teachers of color)
 4. At least 80% enter the workforce right away (~40-50% entry rate nationally)
 5. At least 80% five-year retention rate (~40-50% leave within 5 years)

And all of these would have needed to happen **even before** the dismantling of the Department of Education...

Where administrators and policymakers can focus their attention:

- 1) The supply of new special education teachers**
- 2) SET working conditions**

School factors associated with teacher turnover

Factor	# of studies	Main effect estimates					
		Odds ratio	Logged odds ratio	SE	Lower bound	Upper bound	p
Panel A: School Organizational Characteristics							
Better work environ.	5	0.557	-0.585	0.271	-1.116	-0.054	0.031
Administrative support	13	0.796	-0.229	0.061	-0.348	-0.110	0.000
Induction/mentoring	11	0.767	-0.265	0.051	-0.365	-0.166	0.000

SET working conditions

- Caseload size: larger caseload suggests more turn over
- Students' disability: SETs with emotional and behavioral disorders are more likely to turn over
- Paperwork and nonteaching responsibilities contributes to burnout and turnover
- Paraprofessional and administrative support as well as collegial support and collaboration decrease turnover

Bonus slide: Average New SET Supply Per Institution by For-Profit Status Using Title II Data

