



Understanding Teacher Supply and Demand:

An up-close look at
elements of teacher
recruitment and retention

April 8, 2022; 2pm PST

A presentation
to the Nevada Task Force
on Teacher Recruitment and Retention

Photo is for illustrative purposes only.
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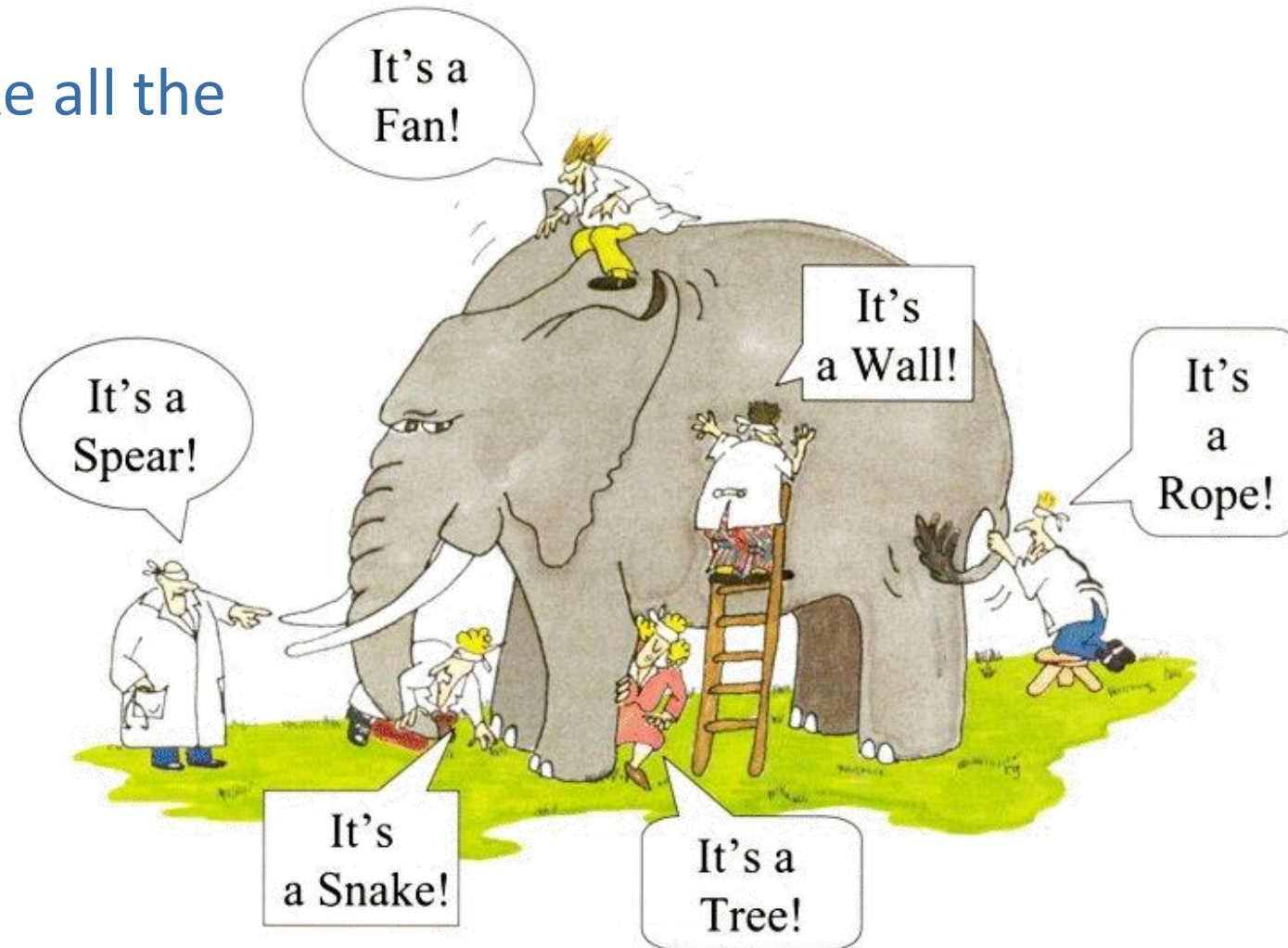


Agenda

- Discuss benefits and research basis for a “supply and demand” data analysis lens
- Present key considerations for data analysis
- Share example data visualizations using national and state data within categories
- Q&A

Recruitment and Retention through a Supply and Demand Lens

➤ **Perspective** can make all the difference.



Recruitment and Retention through a Supply and Demand Lens

- Factors in recruitment and retention of teachers are complex.
- A supply and demand lens facilitates a *step back* and a bird's-eye view.
- And a broader perspective *helps to identify root causes* as opposed to just symptoms.



Research Foundation of Teacher Supply and Demand Analysis

- Several supply and demand models exist¹ but all generally include analysis of:
 - > sources of new supply (i.e. Teacher Pathways),
 - > the movement of existing supply (i.e. Currently Employed)
 - > the number of teachers demanded (i.e. District Needs)

¹ **For example:** Sutchter, Darling-Hammond, & Carver-Thomas (2016); Lindsay, Wan, Berg-Jacobson, Walston, & Redford (2016); Lazarte-Alcala (2018); Levin, Berg-Jacobson, Atchison, Lee, & Vontsolos (2015); Smith (2018); Zagorsky, Olsen, Hawley, & Gnagey (2013); Hill, & Hirshberg (2006)

Research Foundation of Teacher Supply and Demand Analysis

- These analyses often report data at various levels of aggregation including:
 - > State
 - > Region
 - > District
- Many also report data by school and district characteristics including:
 - > Locale
 - > Student population
 - > Teacher population



Research Foundation of Teacher Supply and Demand Analysis

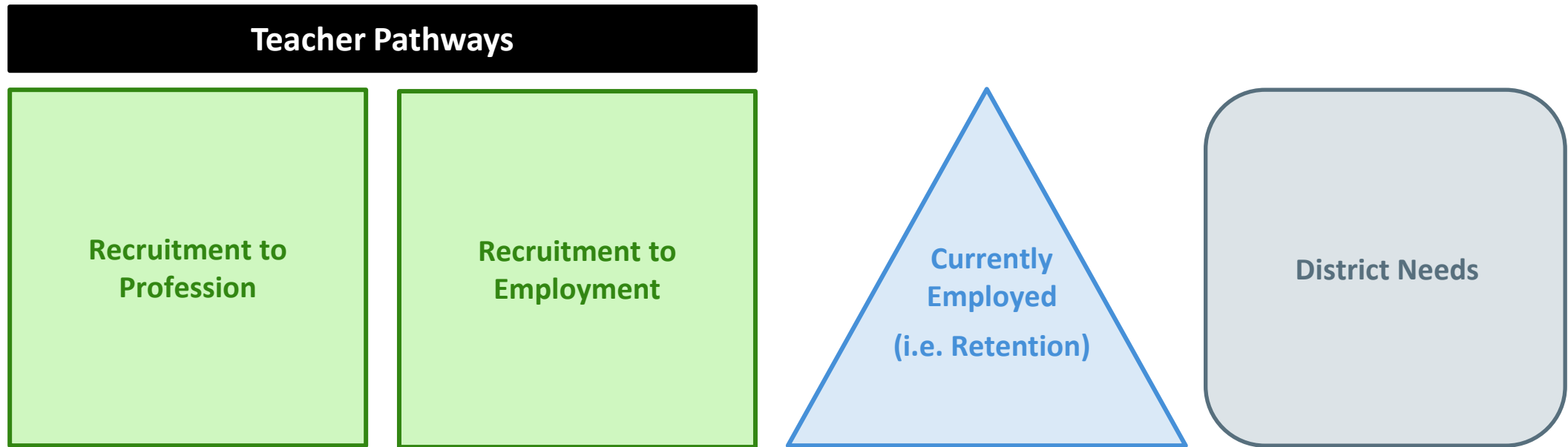
➤ Some illustrative example state supply and demand reports include:

- > National: [Learning Policy Institute](#); [Institute of Education Sciences](#)¹
- > State-Specific: [OK](#), [MA](#), [IL](#), [TX](#), [OH](#)²

¹ Sutcher, Darling-Hammond, & Carver-Thomas (2016); Lindsay, Wan, Berg-Jacobson, Walston, & Redford (2016);

² Lazarte-Alcala (2018); Levin, Berg-Jacobson, Atchison, Lee, & Vontsolos (2015); Smith (2018); Zagorsky, Olsen, Hawley, & Gnagey (2013); Hill, & Hirshberg (2006); Sullivan, Barkowski, Lindsay, Lazarev, Nguyen, Newman, & Lin (2017)

Recruitment and Retention: Considerations



Recruitment to
Profession

- >> Traditional higher education preparation programs (EPPs)
- >> Alternative routes to licensure (ARL)
- >> “Grow your own” pathways



Recruitment to
Employment

- » Prepared in NV (new to the profession)
- » Teachers new to state
- » Out-of-country recruitment



Common Analyses

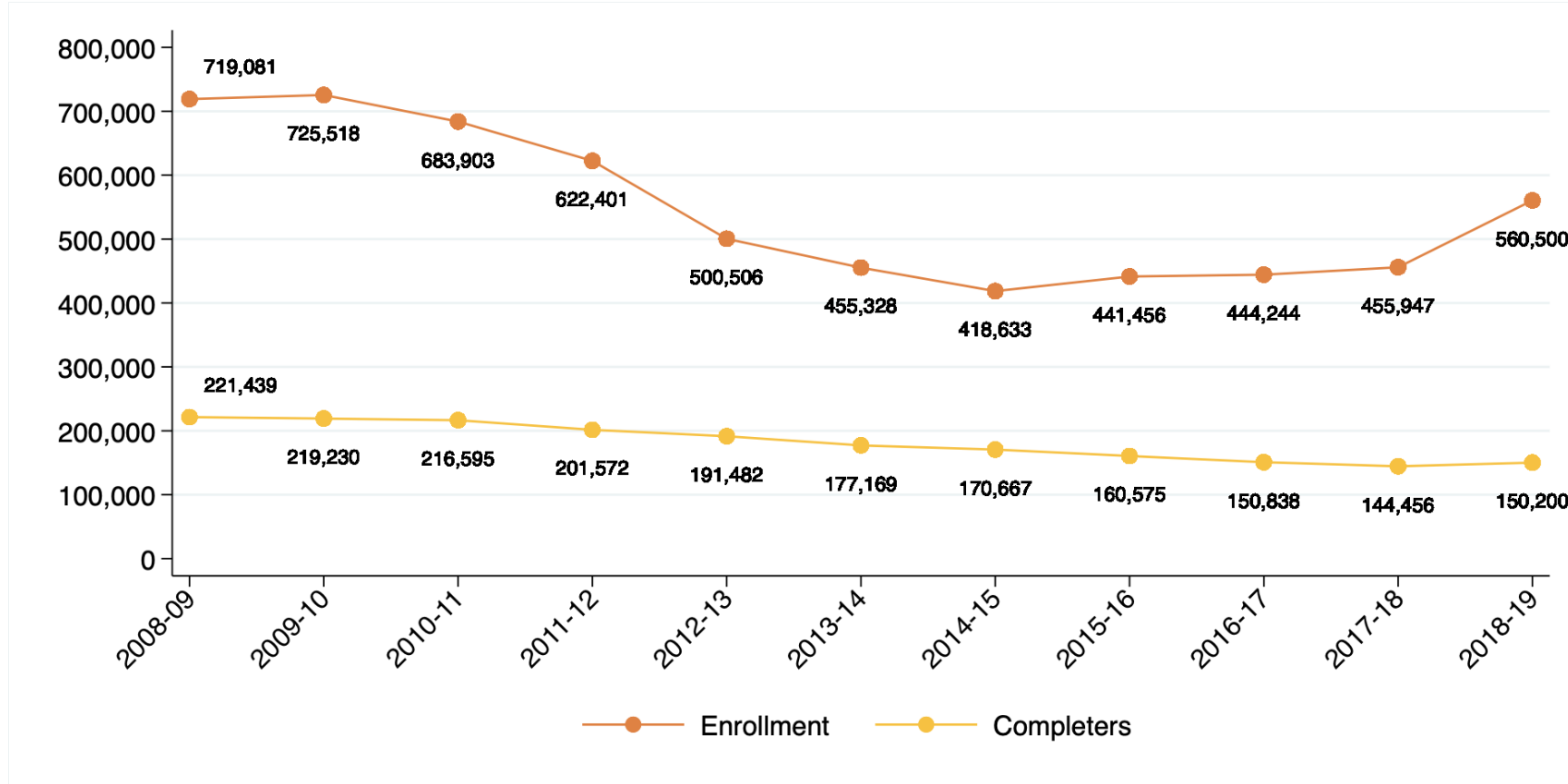
- Analysis of teacher pathways often examine trends in EPP enrollment and completion.
 - > **Enrollment:** indicates success in *recruiting to the profession*
 - > **Completion:** an important indication of potential for *recruitment to employment*

- Reports also often analyze the changes in proportion of students prepared with respect to program type – traditional or alternative.

- Analysis at the state level by area of focus by specific programs is also a common analysis.

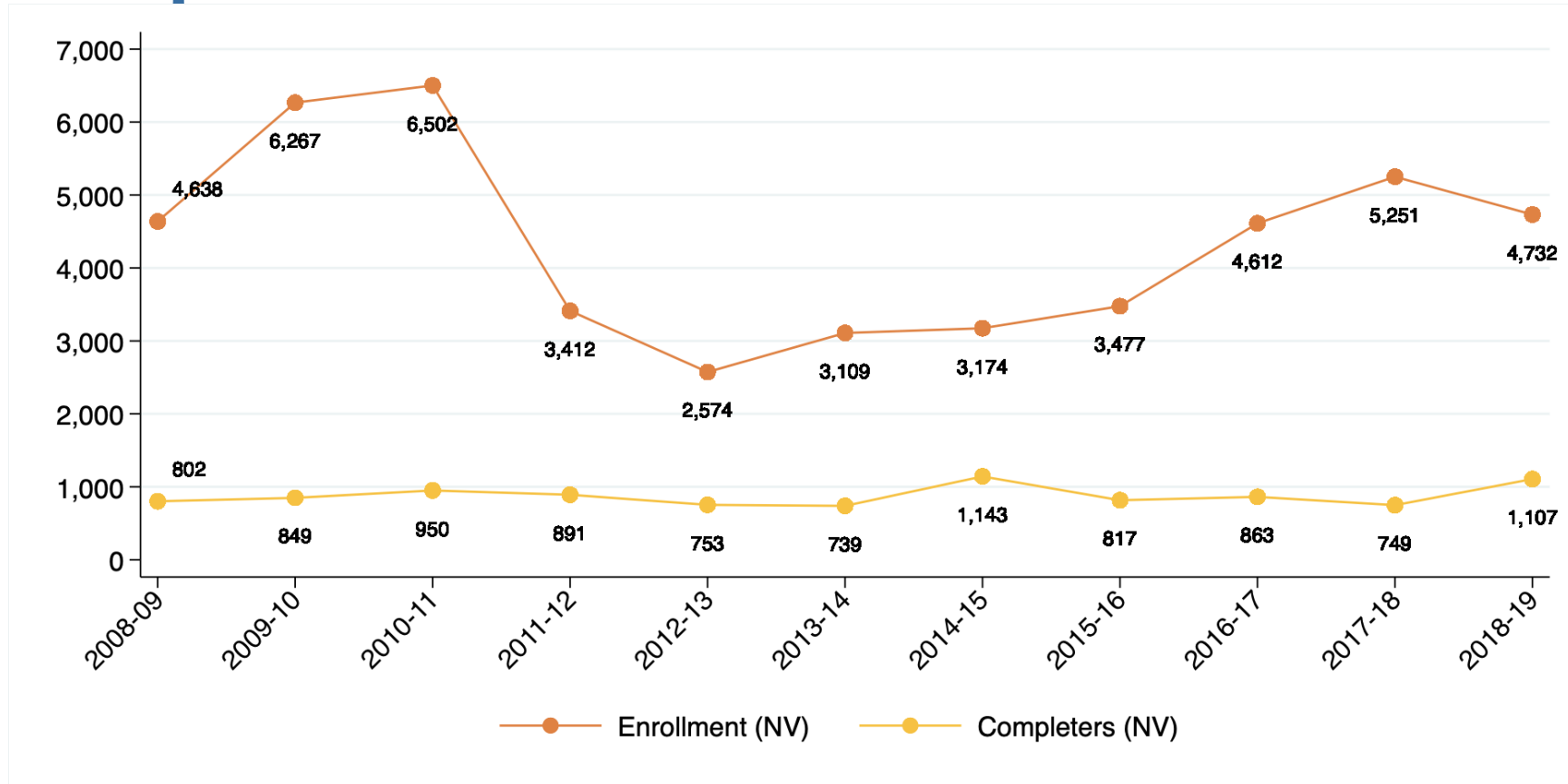


National Data: EPP Enrollment vs. Completers – 2008-09 to 2018-19



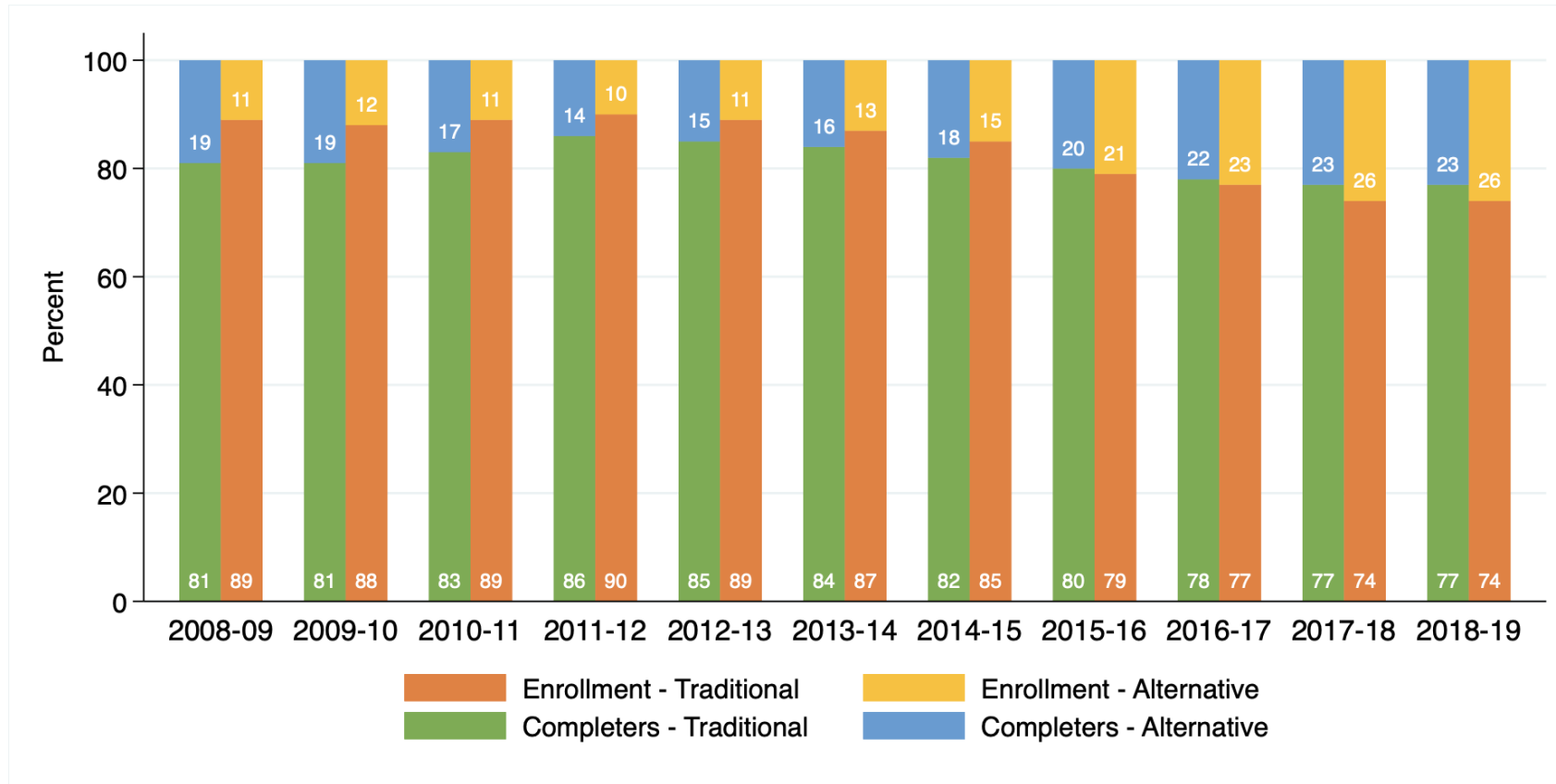
Source: U.S. Department of Education, Higher Education Act Title II State Report Card System

Nevada Statewide Data: EPP Enrollment vs. Completers – 2008-09 to 2018-19



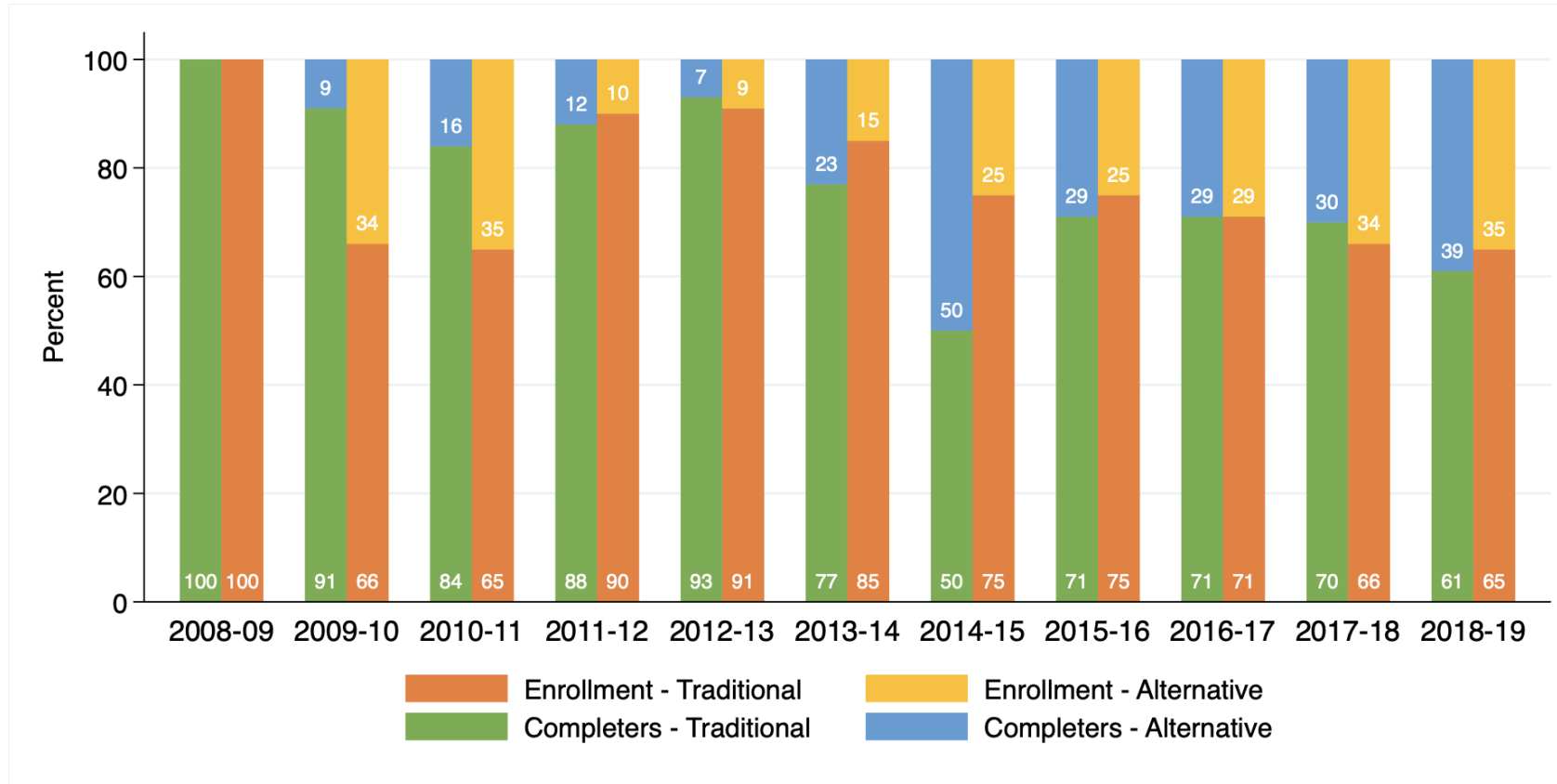
Source: U.S. Department of Education, Higher Education Act Title II State Report Card System

National Data: EPP Enrollment/Completers by Program Type – 2008-09 to 2018-19

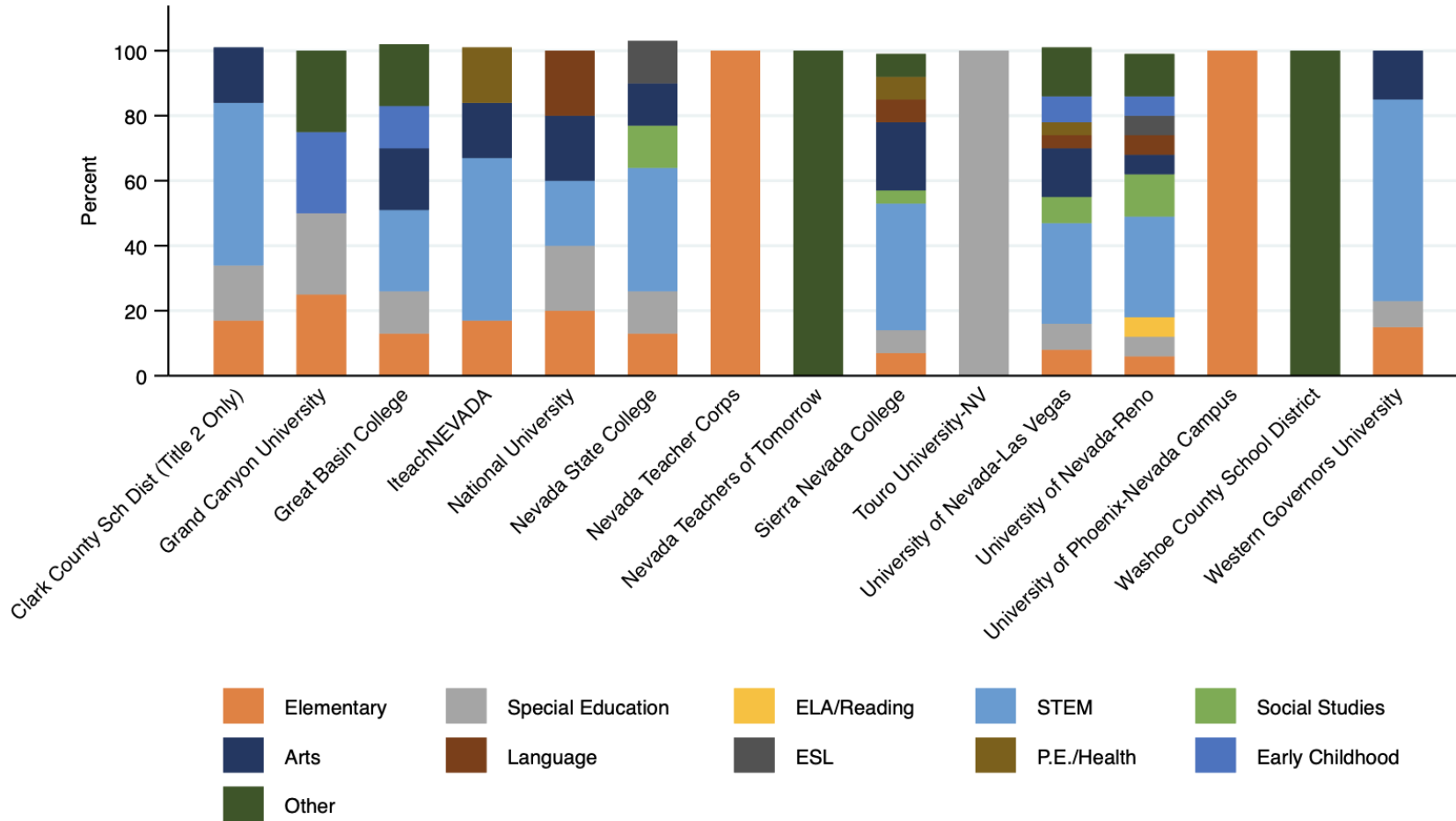


Source: U.S. Department of Education, Higher Education Act Title II State Report Card System

Nevada Data: EPP Enrollment/Completers by Program Type – 2008-09 to 2018-19

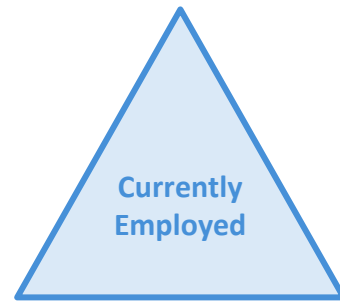
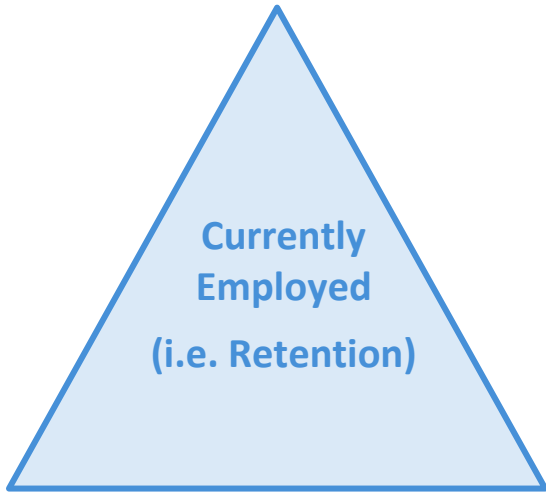


Source: U.S. Department of Education, Higher Education Act Title II State Report Card System



Nevada Statewide Data: EPP Area of Focus by Program – 2018-19

Source: U.S. Department of Education, Higher Education Act Title II State Report Card System



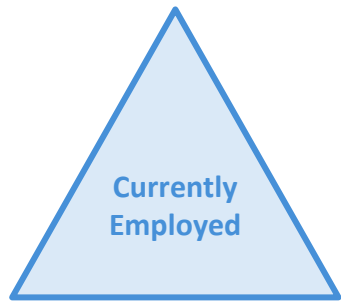
>> Teachers currently employed in the public education system in Nevada

>> Includes:

- > *Retained Teachers* – retained within the *state*, not necessarily within a district or school
- > *New Teachers* – new to the profession *and* new to the state



Common Analyses

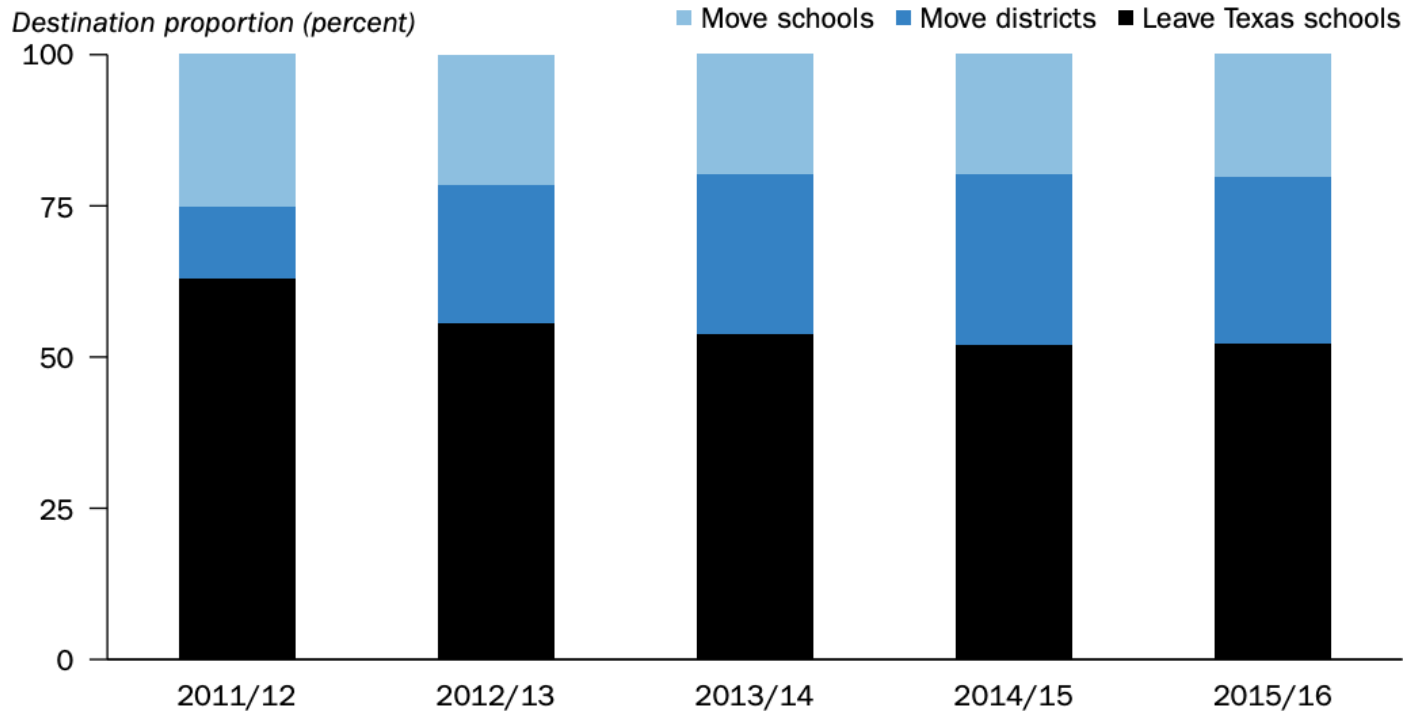


- Analysis of teacher mobility including retention and attrition. Specific mobility categories generally include:
 - > *Stayers* – retained to school
 - > *Moved Schools* – moved to a different school within district
 - > *Moved Districts* – moved to a different district within the state
 - > *Leavers* – not retained within the state public education system
- Some reports focus career pathways of beginning teachers
- Licensure is also analyzed including:
 - > Prevalence of new vs. renewed licensure
 - > Composition of licensure by endorsement



Example Figure Illustrating Mobility Categories

Note: Based on analysis of historical data conducted by NDE, mobility is a minimal issue in Nevada.



Source: Sullivan, Barkowski, Lindsay, Lazarev, Nguyen, Newman, & Lin (2017)



Currently
Employed



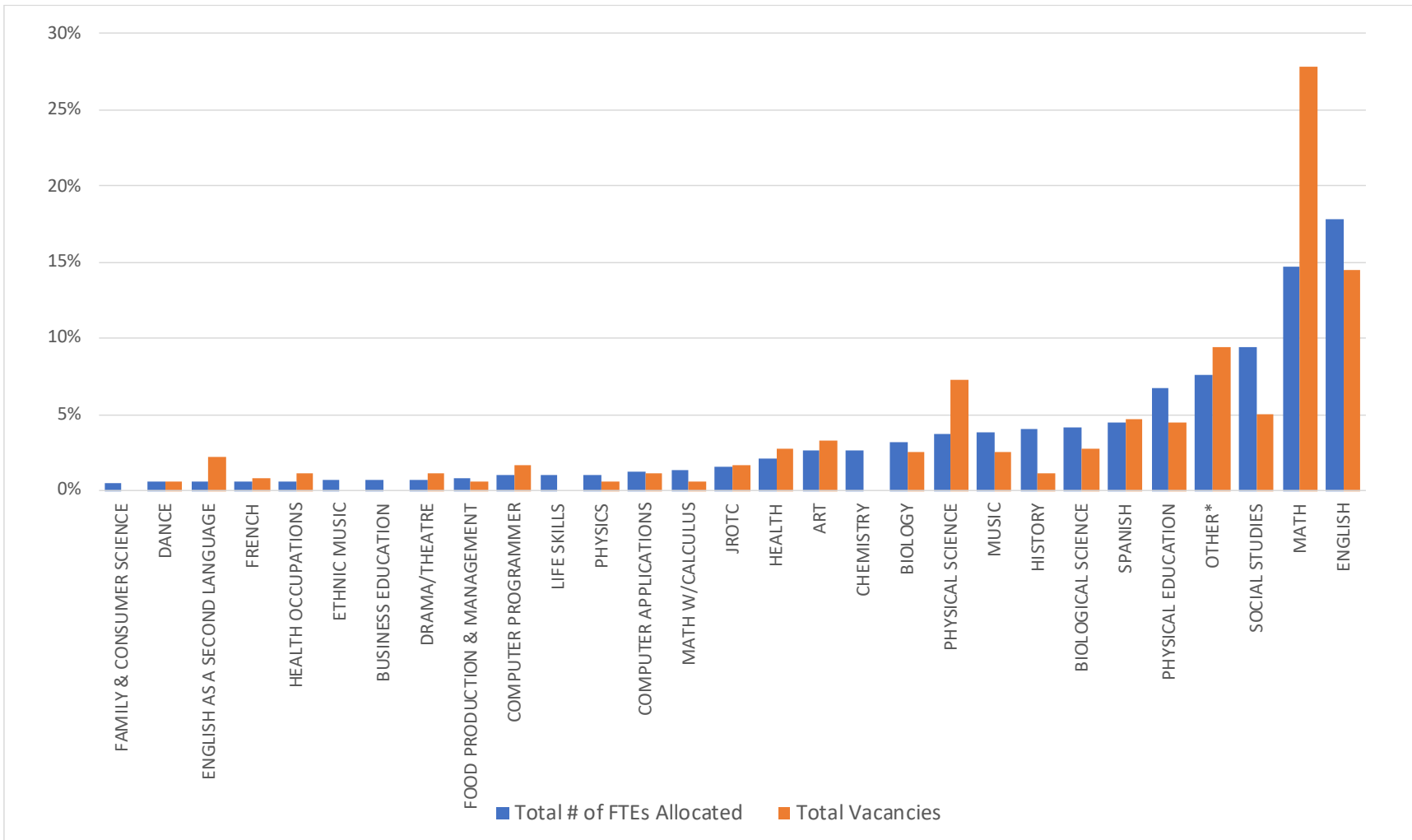
- >> Includes vacancies resulting from:
 - > Teacher attrition
 - > New teaching positions

- >> May be specified separately for specific teaching assignments (e.g. STEM, ELA, P.E., etc.)



Common Analyses

- » Analysis of vacancies over time and across settings
- » Analysis of new positions over time
- » Projections of student enrollment paired with target staffing ratios



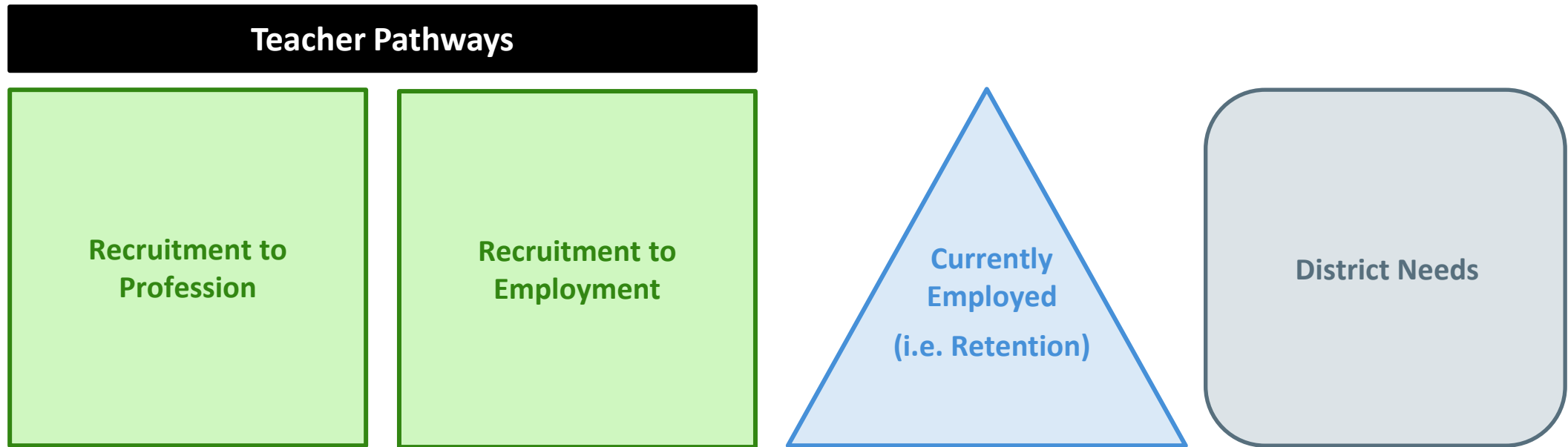
Nevada Data: Vacancies and Total FTEs by Assignment in High School Grades (9-12) – 2019-20

Source: Nevada Department of Education, Teacher Shortage Area Data Collection (2020)

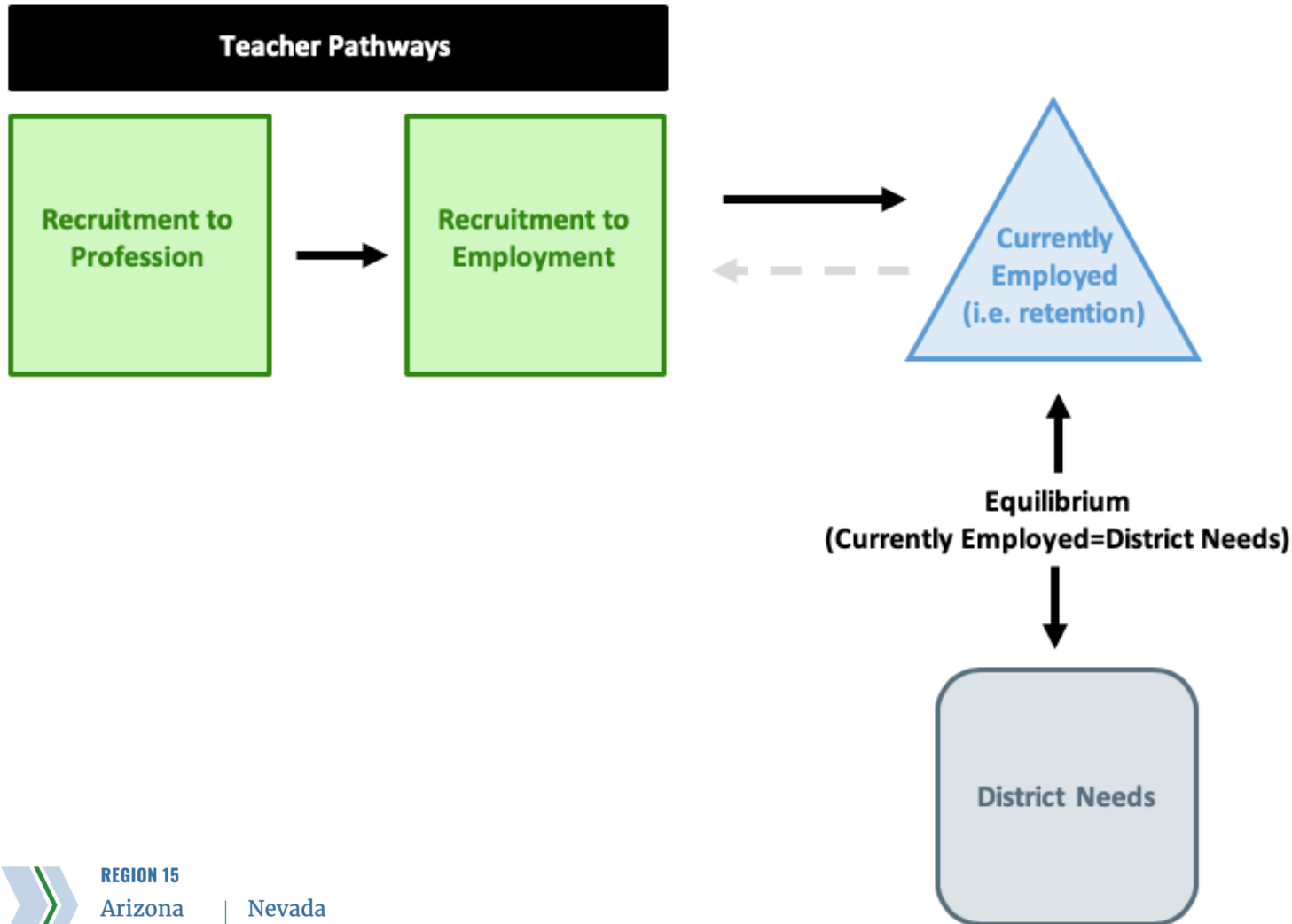
*Other includes all Assignments making up less than 1% of Total # of Assigned FTEs individually



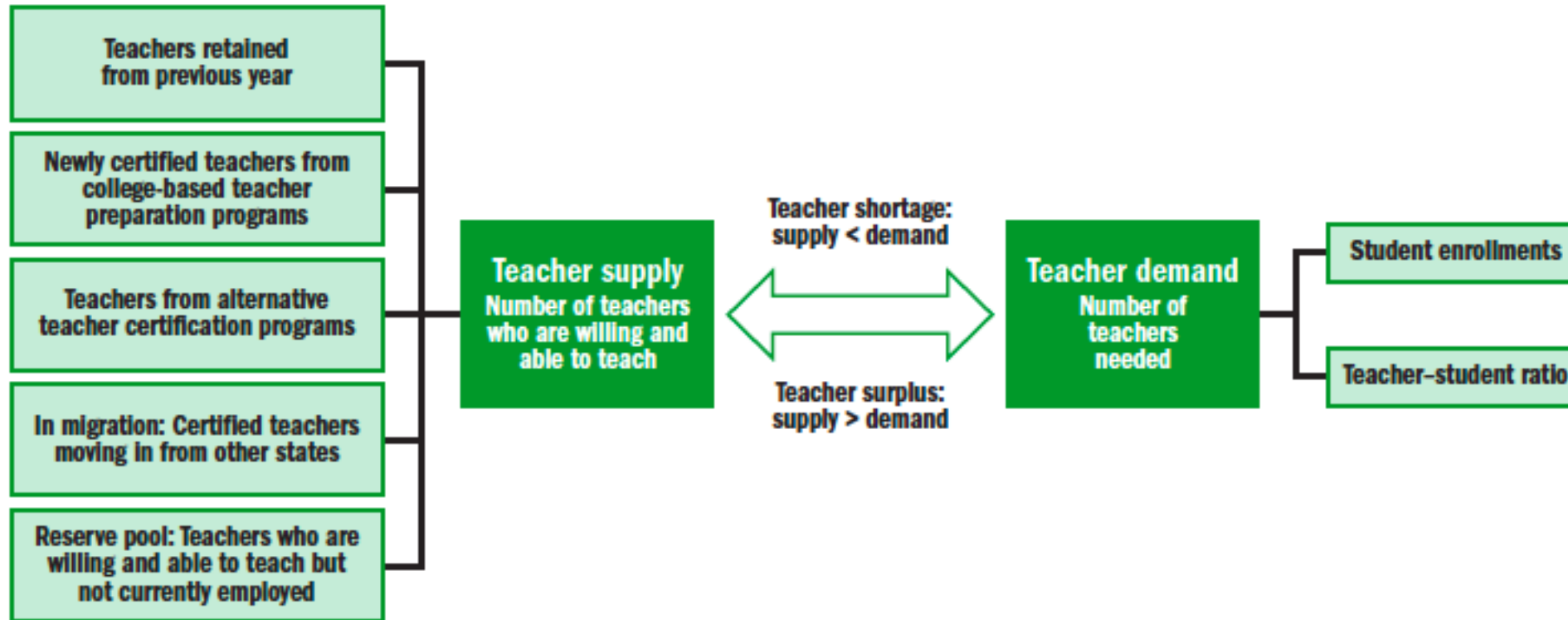
Recruitment and Retention: Considerations



Recruitment and Retention: Basic Framework



Recruitment and Retention: Another Example



Source: Lindsay, Wan, Berg-Jacobson, Walston, & Redford (2016)

Shortage Indicators

- Serve as a proxy for teacher shortage and provide rough indication of the location and severity of shortages.
- Often include the following metrics:
 - > Vacancies/Unfilled positions
 - > Out-of-field teachers (i.e. assigned outside of licensure area)
 - > Irregular or provisionally certified teachers



Shortage Indicators: Selected Research Findings

➤➤ Teacher Labor Market:

- > Fewer high school graduates are interested in pursuing education majors, and fewer college students are pursuing teaching careers (cited, Page 2)

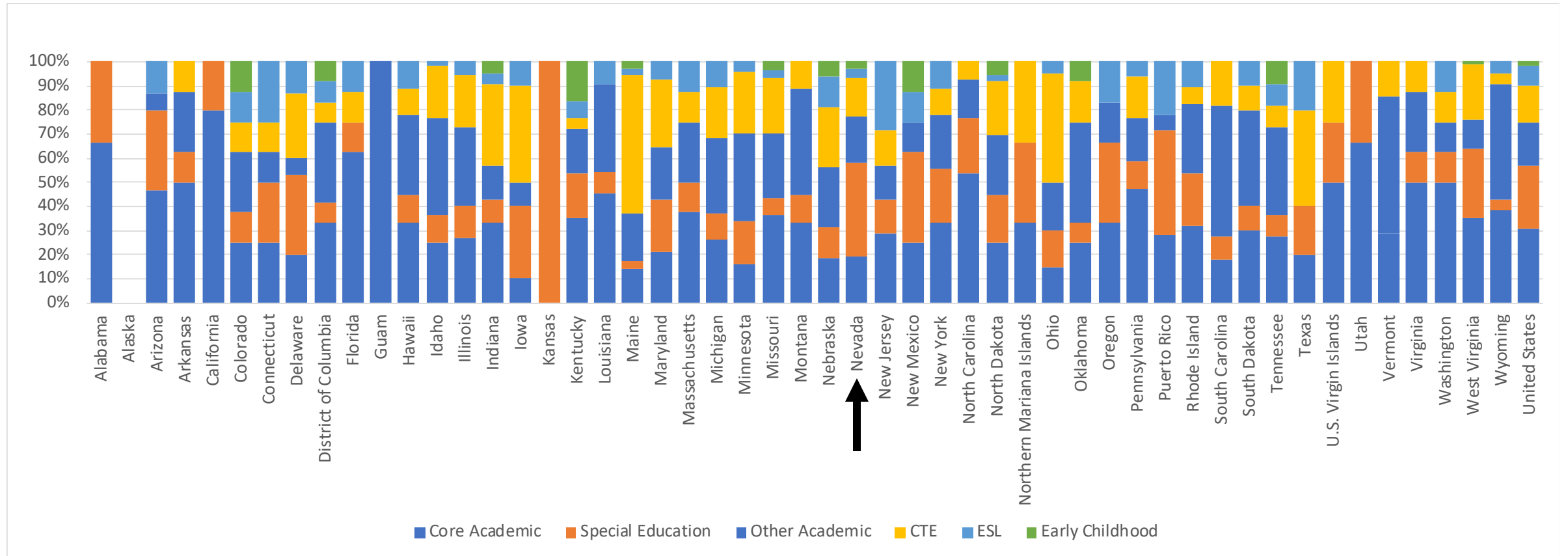
➤➤ State-specific teacher shortages

- > Teacher shortages within states are impacted by the unique education policies that govern that state.
- > Teacher shortages are often confined to certain subject areas such as math, science, and special education.
- > Teacher shortages are often confined to schools with specific characteristics.

Source: Aragon (2016)



National Data: Teacher Shortage Areas - 2020-21



Source: National Teacher Shortage Area Data (2021)

Questions?

CCNETWORK
Comprehensive Center Network



REGION 15

Arizona
California

Nevada
Utah

Thank you!

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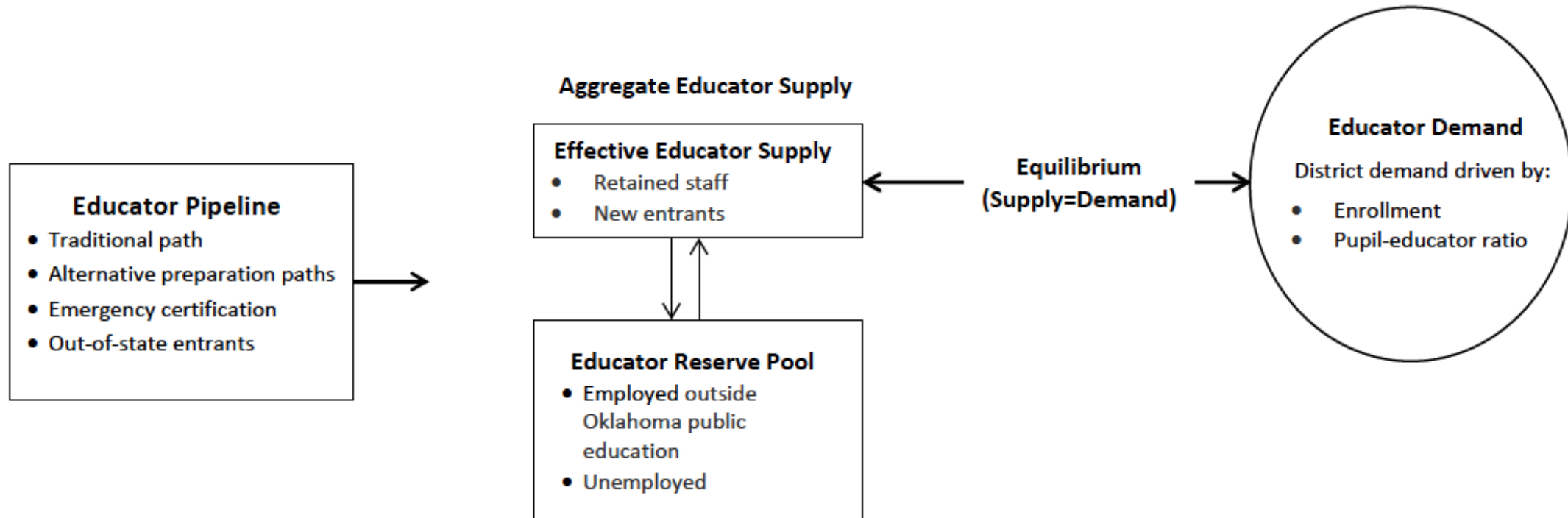
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Appendix Slides

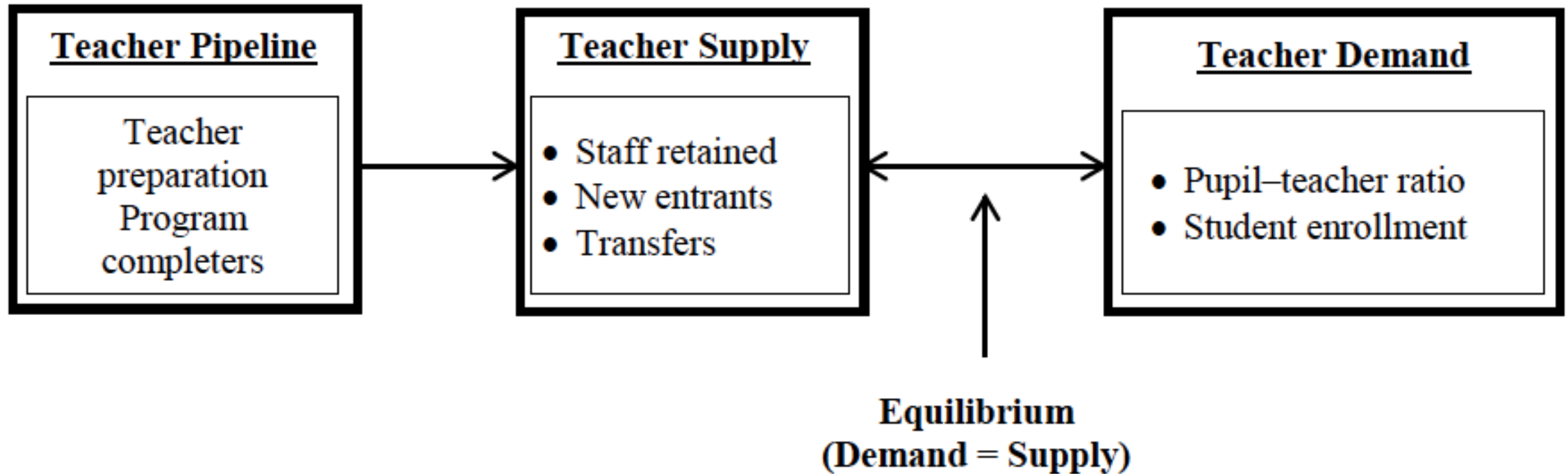


Example Framework #1



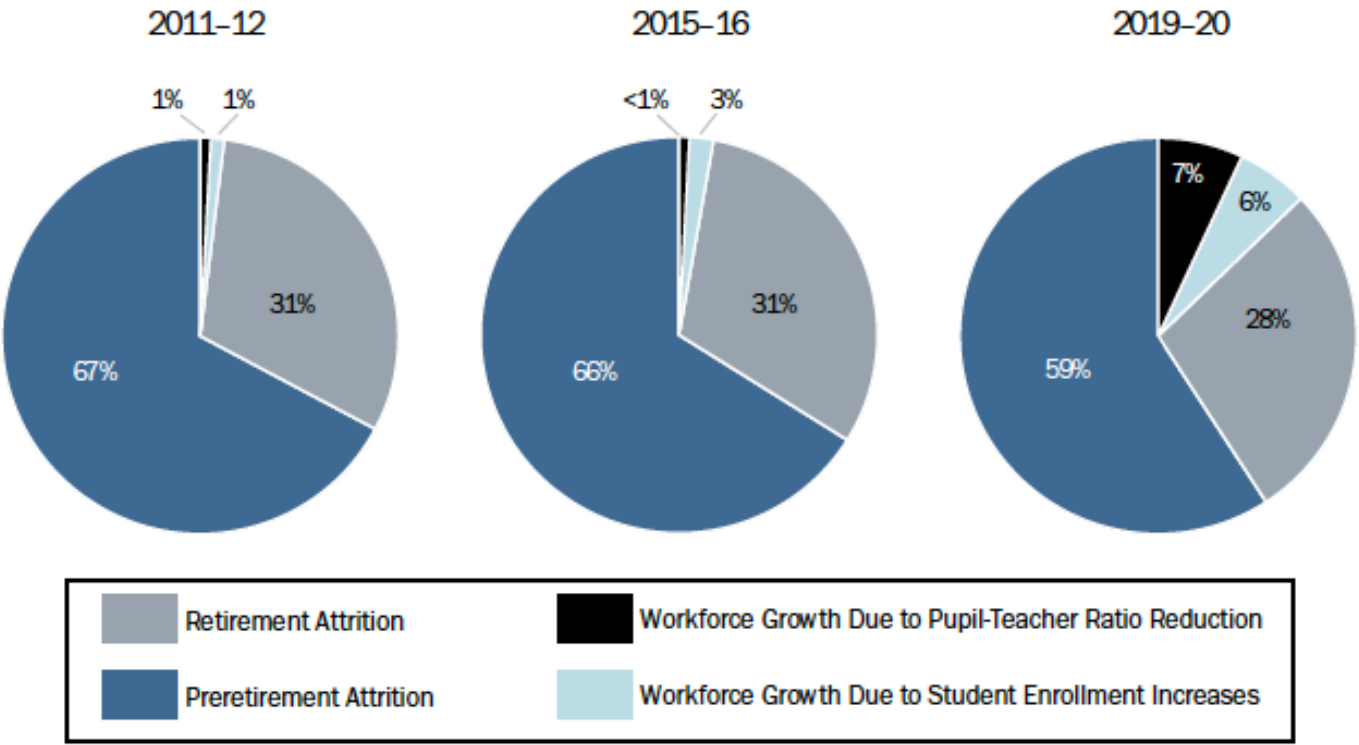
Source: Berg-Jacobson, A., & Levin, J. (2015). Oklahoma Study of Educator Supply and Demand: Trends and Projections. American Institutes for Research.

Example Framework #2



Source: Levin, Berg-Jacobson, Atchison, Lee, & Vontsolos (2015)

Example Framework #4 - Demand



Source: Sutchter, Darling-Hammond, & Carver-Thomas (2016)