



UNC Teacher Quality Research: Report on Program Effectiveness

*Presentation to the North Carolina
Joint Legislative Education Oversight Committee*

November 27, 2012

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We are grateful to the NC Department of Public Instruction, the NC Public School Forum, Teach For America, and the UNC General Administration, for providing data and expert advice essential for this research



THE UNIVERSITY
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A Strategic Priority of the University



- UNC overall priority: *Preparing More and Better Teachers and School Leaders for North Carolina Public Schools*
- Key strategies to address the goal:
 - Recruitment
 - Preparation
 - New Teacher and School Leader Support
- Productivity of initially licensed teachers
- Research approach to address quality preparation:
 - Entry Model, Persistence Model, and Impact Model(s)

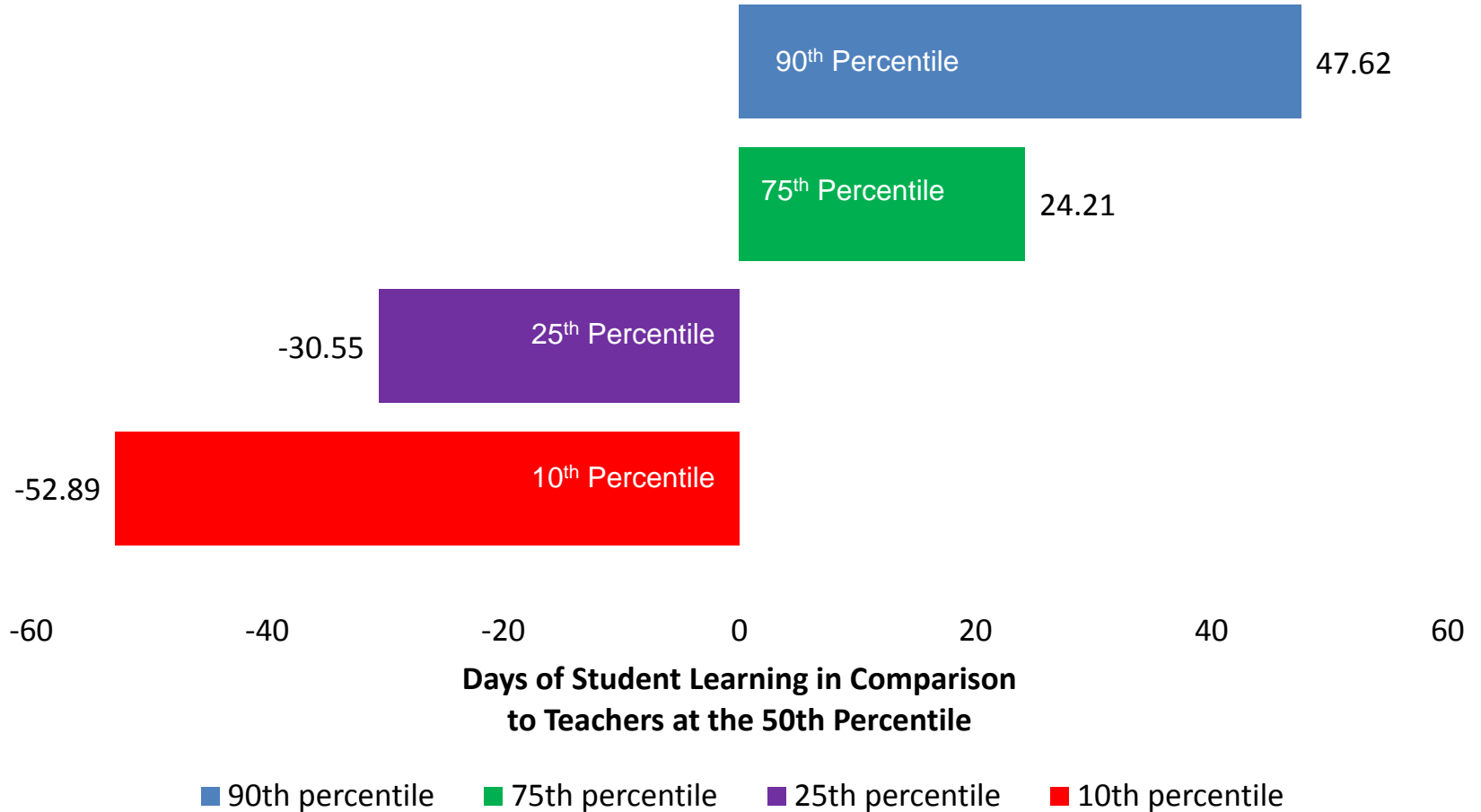




Teacher Effectiveness: Elementary Grades Mathematics



Elementary Mathematics Teacher Effectiveness

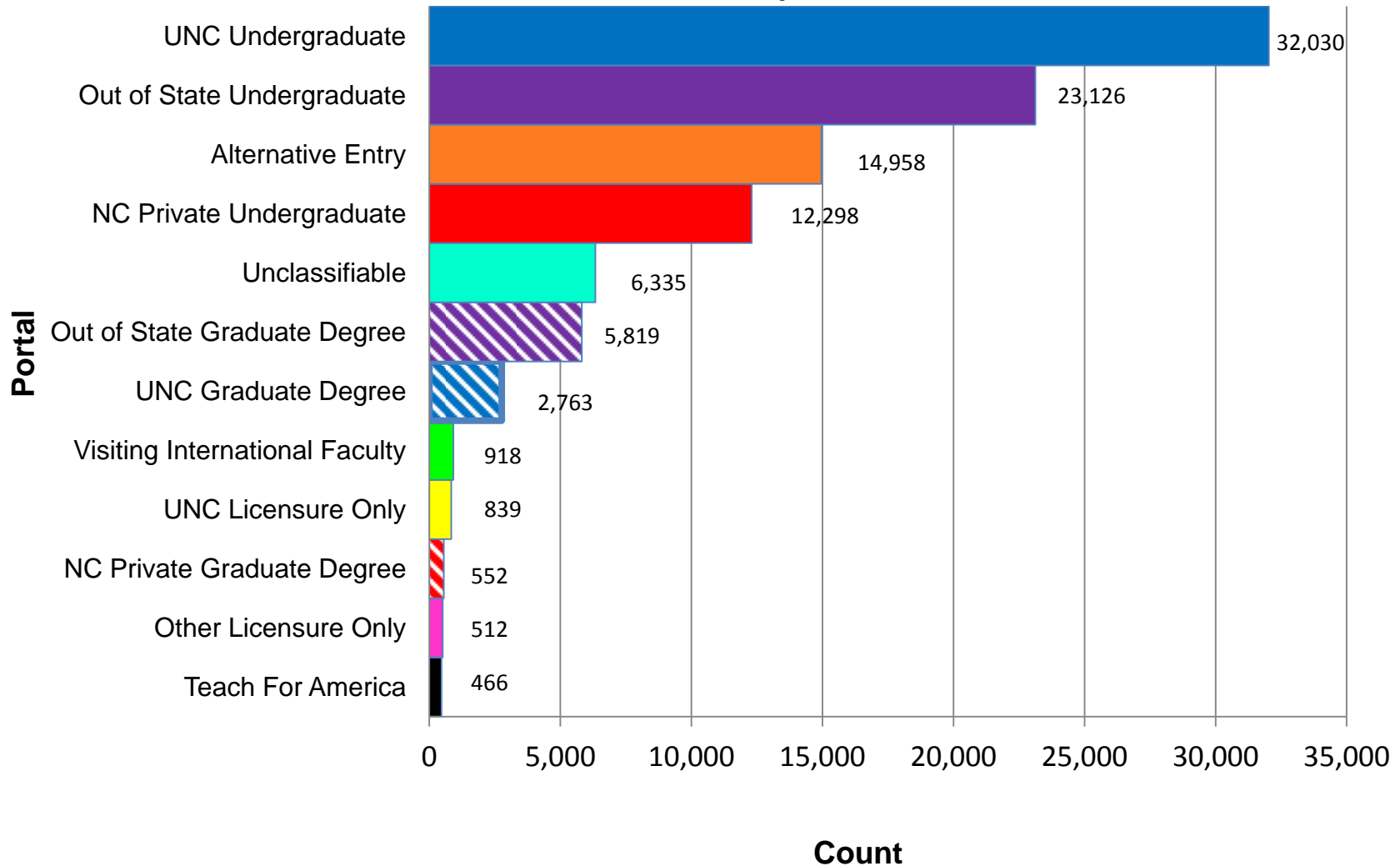




Number of North Carolina Public School Teachers By Portal of Entry: 2009-10



In 2009-10 there were 100,616 individuals paid as teachers
in North Carolina public schools

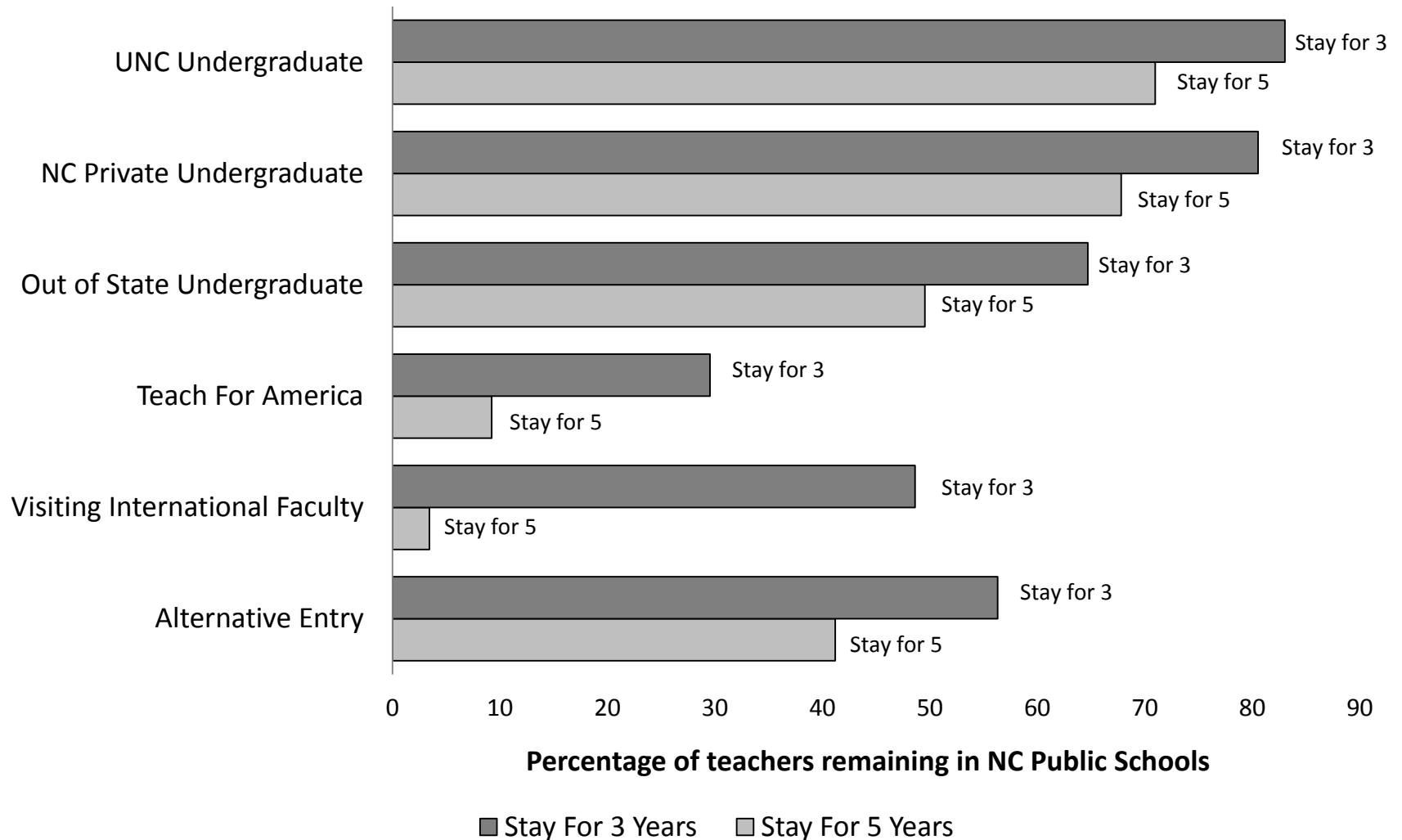




Teacher Persistence in North Carolina Public Schools by Portal



New Teachers Employed for 3 Years and 5 Years





Summary of Findings from Prior Research on Teacher Effectiveness in North Carolina



- **UNC Undergraduates**
 - Source - Largest source of teachers in NC - 32% of workforce (32,030)
 - Stay for 3 – approximately 80% stay for 3 years
 - Stay for 5 - Most likely to stay for 5 years (over 70% persist for at least 5 years)
 - Quality - Performance is slightly better than average
- **Out of state undergraduates**
 - Source – 2nd largest source of teachers in NC - 23% of workforce (23,126)
 - Stay for 3 – approximately 65% stay for 3 years
 - Stay for 5 - Much less likely to stay for 5 years (50% persist for at least 5 years)
 - Quality – Least effective source of teachers in NC. Perform worse where they are most highly concentrated – in elementary reading and mathematics
- **Alternative entry teachers (other than Teach For America & Visiting International Faculty)**
 - Source – 3rd largest source of teachers in NC - 15% of workforce (14,958)
 - Stay for 3 – approximately 55% stay for 3 years
 - Stay for 5 - Much less likely to stay for 5 years (40% persist for at least 5 years)
 - Quality – Performance is poor in HS overall, where most highly concentrated
- **Teach For America teachers**
 - Source - Smallest source of teachers in NC– 0.50% of workforce (466)
 - Stay for 3 – approximately 30% stay for 3 years
 - Stay for 5 - Less than 10% persist for 5 years
 - Quality – most effective source of early-career teachers in NC after turnover



Program Effectiveness Report: Study Purpose, Data, and Methods



Purpose:

- How effective are teachers from UNC's 15 teacher preparation programs in terms of raising student test scores?

Data:

- For the most recent report, we analyzed 2.9 million test scores, 1.8 million students, and 29,602 teachers with **less than 5 years of experience** in all school districts in North Carolina from 2006-07 through 2010-11.

Methods:

- We compared the effectiveness (teacher value-added) of the graduates of 15 UNC teacher prep programs to the effectiveness of all other sources of teachers, including Teach For America, private NC teacher preparation programs, teachers prepared out of state, and alternative entry teachers.
- Teacher preparation program value-added effects were estimated using multi-level models with 16 student, 5 classroom, and 7 school covariates.



Program Report Summary: Study Findings for UNC's 15 Teacher Preparation Programs



UNC Teacher Preparation Programs	Better than all other sources of novice teachers	No different from all other sources of novice teachers	Worse than all other sources of novice teachers
ASU	1	10	0
ECU	3	8	0
ECSU	0	4	0
FSU	1	8	0
NCA&T	0	5	1
NCCU	1	7	0
NCSU	1	10	0
UNCA	0	7	1
UNCCH	1	5	1
UNCC	2	8	1
UNCG	2	9	0
UNCP	0	8	1
UNCW	2	9	0
WCU	1	9	0
WSSU	0	4	0



Program Report Summary: Findings by Level and Subject



Level/Subject	Programs better than all other novice teachers	Programs worse than all other novice teachers
Elementary Math	ASU, UNCG	---
Elementary Reading	ECU	---
Elementary Science	NCCU, UNCW	---
Middle Math	UNCCH, UNCW	---
Middle Reading	---	NCA&T
Middle Science	UNCG	---
Middle Algebra 1	ECU	UNCCH, UNCC, UNCP
High School Math	FSU	UNCA
High School Science	UNCC	---
High School English 1	WCU	---
High School Social Studies	ECU, NCSU, UNCC	---



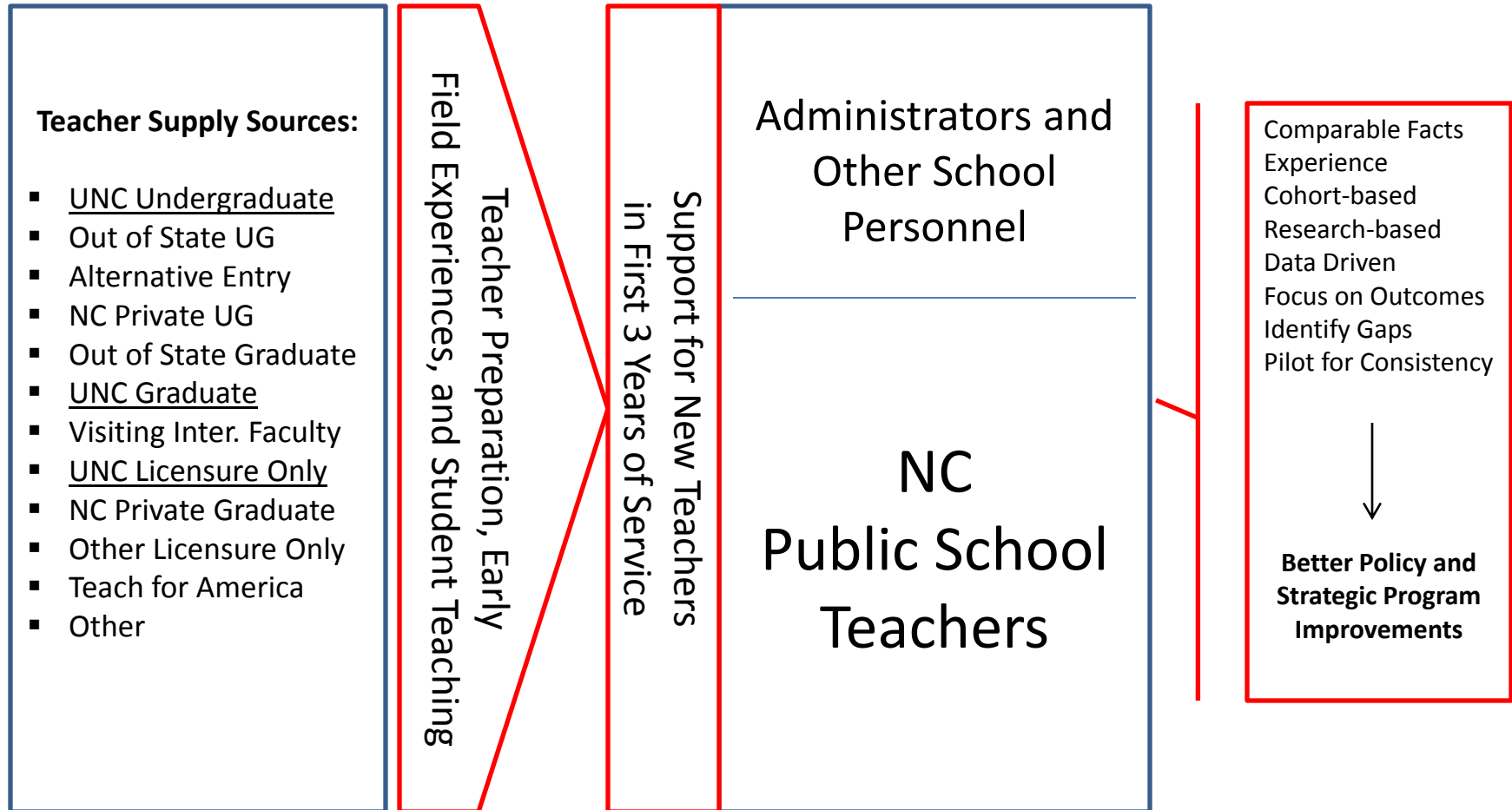
Research-Based Program Improvement Efforts



- Increased productivity in high quality routes of preparation
- Elementary Mathematics Initiative (with plans for the development of a parallel Elementary Science Initiative)
- Burroughs Wellcome Fund (BWF) Scholars Program addressing science and mathematics preparation at the high school and middle grades levels
- New Teacher Support
- Teacher Candidate Performance Assessment Pilot



Teacher Preparation Program Improvement Continuum





Program Improvement and Teacher Effectiveness



Program Improvement Question

Do the current measures of teacher candidate performance used by UNC programs predict teacher effectiveness?

Teacher Candidate Performance Indicators

1. SAT and Praxis Scores
2. Coursework Completed
3. Grades/GPA
4. Ratings of student teaching
5. Ratings of behaviors and disposition by supervisors
6. Ratings of portfolios (evidence of teaching abilities)

Data

- One of the largest UNC teacher preparation program provided data on their elementary teacher candidates which was merged with program research data.

Finding

- None of the teacher candidate performance instruments predicted the teacher value-added when the candidates became teachers
- Mixed results were found for coursework completed; therefore, no definitive conclusions can be made regarding the impact on student learning



Goal: Data and Evidence Based Improvement with a Focus on Student Teaching



First Focus on Student Teaching – Why?

1. This is where prospective teachers show what they can and cannot do in real classrooms
2. Make Objective Assessments of Candidates' Performance
3. Use Assessment Results to Improve UNC Teacher Preparation Programs
 - Where do we teach the things they cannot do well?
 - How can we improve those courses & experiences?
4. Use Assessment Results to Improve Student Teachers Performance Prior to Program Completion



Addressing Teacher Performance Assessment through a Two-Part Strategy



Part I: Identify Instrument to assess how well student teachers can perform basic teaching functions

- Plan solid lessons
- Carry the lessons out in real classrooms
- Assess what their students have learned
- Use assessment results to help struggling students and to improve their own instruction

Part II: Help UNC teacher educators learn how to use the instrument

- Help student teachers improve their practice
- Improve their own teacher preparation programs



Importance of Using a Valid and Reliable Assessment Instrument



- Essential for objective assessment
 - One does not see what they want to see... and congratulate themselves
 - One sees what is really observed and works to improve the outcome
- Identify instrument that can assess actual performance reliably
- Allows for benchmark assessments against national and international standards
- Allows for student teachers' performance to be assessed by independent outside scorers



Selection of Teacher Performance Assessment Instrument



- Reviewed 11 instruments and chose the “edTPA”
 - “TPA” = Teacher Performance Assessment
 - “ed” = educative, not just to assess but also to educate student teachers and improve preparation programs
- Developed at Stanford University building on prior work completed in California
- Pilot-tested in 25 states, including North Carolina
- Instrument is supported by:
 - Council of Chief State School Officers
 - Council for Accreditation of Educator Preparation
 - American Association of Colleges of Teacher Education



Assessment Instrument Pilot with UNC Campuses



- Why Pilot in NC?
 - Ensure the edTPA is really usable and helpful in UNC teacher preparation programs
 - Ensure the edTPA results really predict teacher effectiveness in the classroom
 - “Effectiveness” = *Do teachers with high scores from the edTPA instrument produce high levels of student learning in the classroom?*

- Seven UNC Campuses Participating in the Pilot
 - Three started last year: ECU, UNC-CH, WSSU
 - Four more joined this year: NCSU, UNC-Asheville, UNC-Charlotte, WCU



Next Steps with the Assessment Instrument Pilot



- Support the assessment instrument pilot through
 - Training by instrument experts
 - Discussions and exchange among participating universities
 - Joint scoring of student teacher portfolios
 - Scoring checked against independent scorers
- Test whether the edTPA assessment instrument results predict effectiveness in the classroom
- If so, expand the effort to other UNC Teacher Preparation Programs



Transforming Research into Action



- UNC is taking ownership and responsibility for “evidence based” program improvements:
 - Improve existing UNC teacher preparation program
 - Develop, pilot and evaluate innovations in UNC teacher preparation programs
 - Increase UNC productivity to off-set dependency of other portals that perform worse
 - Improve recruitment and selection into UNC teacher preparation programs
- Identify gaps (e.g. preparation with the NC Standard Course of Study or providing frequent and rigorous feedback to beginning teachers) in lower performing portals that could be addressed through specific strategies with UNC preparation programs
- Coordinate with K-12 partners to develop, pilot, and evaluate innovations
- Identify aspects of TFA that are “portable and scalable” to UNC programs:
 - Selection based on “soft skills” e.g. perseverance, engaging audience and leadership
 - Greater focus on preparation to teach specific objectives in assigned course/grade based on NC Standard Course of Study
 - Intensive observation, collaboration and feedback during pre-service preparation as well as the first year in the classroom
 - Institute “evidence based approach” to teacher preparation