



Public Schools of North Carolina
State Board of Education
Department of Public Instruction

Report to the North Carolina General Assembly

Alternative for Measuring Teacher
Effectiveness

Session Law 2019-212 (SB621) Section 1

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Alternative for Measuring Teacher Effectiveness

Context of the North Carolina Final Exams

Session Law 2019-212 (SB 621) eliminates the use of the North Carolina Final Exam (NCFEs) as part of the statewide testing program to assess teacher performance and professional growth, effective with the 2020-2021 school year. Additionally, the statute requires the State Board of Education (SBE) and the North Carolina Department of Public Instruction (NCDPI) to submit, by March 15, 2020, to the Joint Legislative Oversight Committee a plan on how to use other means to accomplish the purposes for which data are collected by the NCFEs.

Currently, North Carolina Final Exams provide information to teachers on their students' academic progress in core subjects (science, history, mathematics, and English) not covered by an end of grade (EOG) or end of course (EOC) exam. Approximately 17,000 (16,892) teachers in the state receive growth data from the NCFEs. Many of these teachers also receive student growth data from an EOG or EOC, but for about 70% (12,061) of these teachers, NCFEs are the only source of student growth. These are the academic courses that are covered by the NCFEs: Social Studies (middle grades), Science (6th and 7th grades), Pre-Calculus, Advanced Functions and Modeling, Discrete Mathematics, Math 2, American History I & II, American History: Founding Principles/Civics, World History, Chemistry, Physical Science, Physics, English Language Arts I, III, and IV.

Proposed Model for Measuring Teacher Effectiveness

NCDPI has consulted with faculty members from the state's Educator Preparation Programs (EPPs), leaders from our local school districts, and nationally recognized education researchers to help formulate the recommendations put forth in this document. Similar to using value-added to measure teachers' effectiveness, there are advantages and limitations to each of the alternatives offered in this document. In forming these recommendations, NCDPI assumed that the legislature would expect these alternatives to reflect the qualities of the state's value-added model: validity, reliability, the ability to differentiate among teachers, and grounded in student learning.

At its February 2020 meeting, the State Board of Education requested NCDPI staff to bring a single recommendation for measuring effectiveness for teachers who currently administer North Carolina Final Exams. Each of the five recommendations put before the State Board of Education has strengths and weaknesses if employed as a single measure of effectiveness (see Appendix A). Rather than recommend an approach that has the fewest, or least problematic, weaknesses NCDPI has chosen to recommend a process that leverages the strengths of all the proposed measures.

The graphic below illustrates a process that can be implemented for the targeted teacher population, as well as all North Carolina teachers. The process focuses on three key components of effective teaching: 1) Professional Practice, 2) Instructional Practice, and 3) Student Growth.

Measuring Teacher Effectiveness

1. Professional Practice

Standard 1
Standard 5

2. Instructional Practice

Classroom Practice

Standard 2
Standard 3
Standard 4

Student Perception

3. Student Growth

EVAAS
Performance-Based
Assessments

1. Professional Practice – Effective teachers are ones who actively work toward upholding the high standards of the profession and strive for continuous improvement. These characteristics of an effective teacher are captured in two of the standards of the North Carolina Educator Evaluation System (NCEES): Standard I: Teacher demonstrate leadership, and Standard V: Teachers reflect on their own practice.

Standard I is critical for ensuring that today’s classroom teachers are developing the skills they need to increase their impact on student learning for greater numbers of students (e.g., mentor teachers, master teachers, instructional coaches, etc.). Standard V ensures that teachers are consistently using the data and evidence available to them for improving their impact on student learning. NCDPI acknowledges that school administrators are best positioned to evaluate teachers’ performance on these two domains.

2. Instructional Practice – Research indicates that the classroom teacher has the largest impact on student learning. The instructional practices that lead to student learning are captured in three standards of NCEES: Standard II: Teachers establish a respectful environment for a diverse population, Standard III: Teachers know the content they teach, and Standard IV: Teachers facilitate learning for the students.

Student learning is maximized when a teacher has a strong command of the content she/he is teaching and also knows the best way to deliver that content to her/his students (pedagogy). Teachers, especially in the early years of the profession, need expert guidance on both issues. NCDPI recommends that teachers receive expert feedback on their instructional practices from an educator who has demonstrated strong positive results in student learning **in the same content area**. Teachers who have been identified as master teachers (such as those identified in the Teacher Compensation and Advanced Teaching Roles pilots) in their content areas would be the preferred evaluators of these standards. These master teachers would benefit from their close working relationships with teachers to provide feedback on teachers’ instructional practices. The master teachers would evaluate their colleagues on Standards 2, 3, and 4 in the evaluation process. School administrators would review these evaluations and approve the final

summative rating for the teachers. This recommendation does not preclude an administrator from providing this feedback but would require the administrator to be identified as an expert in the content area.

At its heart, learning is a relationship of trust. How students perceive the expertise, practices, and commitment of their teacher has an impact on their learning. Student feedback can help a teacher understand what the needs of the students are and whether they are successful in meeting them. If a student does not feel that he/she can ask a question or ask for an explanation to be repeated, then it is unlikely that student will invest the time and effort required to master the subject. Students are ultimately the clients of our educational system and if we do not seek to understand, from them, what obstacles are standing in the way of their learning, then we cannot provide the best service possible to them.

Student surveys could be developed at the state level and provided to LEAs and charter schools with students matched to the teachers who instruct them in specific subject areas. The results of these surveys could be returned to teachers and schools in a manner that protects student confidentiality. The state would have the ability to disaggregate (where appropriate) the data by student demographics (e.g., race/ethnicity or proficiency level) for teachers and schools. Additionally, teachers and schools would get overall student feedback, as well as subject specific feedback from students. It is not advisable to combine the students' feedback with expert teacher feedback, but a separate measure of instructional practice based on student perceptions is recommended.

3. Student Growth – The state's student growth measure estimates the academic progress a student is making, irrespective of the achievement level (i.e., grade-level proficient, career and college ready, etc.). Teachers receive information on whether their students showed academic progress that was consistent with, above, or below the state average in each grade or subject. This information is critical in helping schools understand how well they are supporting students in their pursuit of mastery of a given subject. While it is true that summative, standardized tests are not the only way to measure whether students are progressing adequately, a valid effectiveness measure for a teacher must contain an objective assessment of how well students are progressing academically over the course of a year. State-wide assessments that are more formative in nature and administered over designated points in the school year could provide better, actionable data for teachers for improvement, as well as a summative rating for their performance over the course of a school year. Performance-based assessments could certainly satisfy this component of the model as well, but they are time-intensive for teachers and administrators, require considerable work and expertise to evaluate with validity and reliability, and often focus, for reasons of practicality, on a narrow subset of the curriculum.

Implementation

NCDPI and the State Board of Education appreciate the fact that the proposed model will require time, resources and policy changes to achieve full implementation across the state. If the state's goal is to move away from standardized, objective, and summative assessments to measure student learning, it will take a number of years to develop and implement alternative assessment systems. Whether the state is inclined to move toward a formative assessment system or a performance assessment system for measuring students academic progress, the result would be a large-scale project from development to implementation.

In order to provide teachers high-quality feedback on their instructional practices, the state's current pilot of the Teacher Compensation and Advanced Teaching Roles pilot would require state-wide implementation. Furthermore, the state would need to establish formally master teacher roles in all educational units in the state. This process would require the State Board of Education to create state-wide criteria for how these master teachers are selected as well as creating official job functions in the state's public-school units. Currently the state has a wide variety of teacher leader roles (e.g., Instructional Coach, Instructional Facilitator, Curriculum Facilitator, etc.) that would need to be clarified and subsumed into the official designation of master teacher. NCDPI and the State Board of Education would also need to ensure that all public-school units (or consortia of public-school units) has sufficient numbers of master teachers to fill the master-teacher role.

Finally, the state would need the resources to develop a platform for gathering and reporting on students' perceptions of their educational experience. The state currently has access to a number of validated survey items that could be used to measure students' perceptions, but the state does not currently have a technology platform to administer and collect data from all public-school units in the state. The creation of this technology platform could be achieved in a relatively short period of time (as compared to the two issues listed above).

Conclusion

The proposed model is the State Board of Education and NCDPI's best recommendation for how to measure effectiveness for those teachers who previously administered the North Carolina Final Exams. It is further recommended that, if accepted, this model be used to measure effectiveness for all North Carolina teachers. Given that the creation and implementation of this revised model of measuring teacher effectiveness will take a substantial amount of time to develop and implement, it is the recommendation of the State Board of Education to allow the state to continue to implement a state-wide assessment program for all middle and high school core courses (i.e., English, mathematics, science, and social studies).

Appendix A: Proposed Measures to Replace NCFEs

1. Student Surveys – North Carolina has piloted student surveys in the state since the time of Race to the Top. Our most recent pilot of student surveys assisted in the development of the Panorama Student Survey (www.panoramaed.com). Student surveys can be used to measure students' perceptions on a variety of topics of educational importance: classroom climate, engagement, grit (perseverance), pedagogical effectiveness, personal interest, sense of school belonging, teacher academic press, and valuing of subject matter. Depending on the number of items, student surveys require 30-60 minutes to implement per course.
 - Pros: student-centered measure, can inform a variety of school improvement efforts, correlates relatively well with student growth measures, low stakes/low pressure for students, can cover additional, untested subject areas
 - Cons: concern over whether students are sufficiently mature to offer objective feedback, concern over how data will be used vis-à-vis teacher evaluation, concern over manipulation of students
2. Student Learning Objectives (SLOs) – SLOs allow teachers to set their own goals for student learning and collect multiple data sources to measure progress for those goals. SLOs can be useful in helping teachers understand the impact of their pedagogy on student learning. SLOs can be uniform in a classroom or vary according to the individual needs of the students. Most SLOs employ a pre- and post-assessment process in order to measure the growth of students over the course of a single year. These assessments may be performance or knowledge based. NC would need to standardize the goals if it were to use SLOs as a measure of teacher effectiveness, but evidences could be either performance or knowledge based.
 - Pros: student-centered measure, allows for personalization, more integrated into instruction, can accommodate local context, can cover additional, untested subject areas
 - Cons: lack of security, assessments (may) require extensive third-party review and appeal process, potential lack of validity and reliability across and within assessments
3. Formative Assessments - Part II of SL 2019-212 creates a NC Personalized Assessment Pilot that seeks to move NC to a through-grade assessment model. If successful, this model could also be applied to the subjects that were previously assessed by the NCFEs. The benefit of such an assessment system would be that teachers receive more time-relevant feedback on their students' learning and can respond instructionally in more productive and efficient ways. Currently there are assessment systems that measure reading and mathematics in the elementary and middle school grades (e.g., MAP). Data from the formative assessments could be collected throughout the academic year to determine an overall, summative effectiveness rating for the teacher.
 - Pros: provides more timely feedback for instructional improvement, allows for differentiated instruction to address individual student needs, standardization across the state, embedded in instruction rather than stand-alone
 - Cons: time for implementation (not a solution for 2020-2021), increases state-wide standardized testing, increased cost and time for implementation in LEAs, theoretical for determining effectiveness
4. Computer Adaptive Testing – Computer Adaptive Testing allows for the assessment of student learning using less time than a traditional paper-pencil assessment. The assessment delivers questions of varying difficulty until the algorithm is able to determine the performance level of the

student. Once the algorithm determines that a student is unable to answer questions of a certain difficulty level, the program delivers more questions in the student's ability level. This option may prove promising in making assessments less frustrating for students of average to lower ability levels.

- Pros: can greatly reduce assessment time, more precise estimate of the student's achievement level, secure testing environment, valid and reliable assessment tool
- Cons: does not eliminate state-wide standardized assessment, equity concerns – do all LEAs have the technology infrastructure to support computerized testing, does not cover breadth of content standards (if time reduction is goal), potentially expensive

5. Observational Evaluation – NC currently has a robust teacher evaluation process and annual evaluations are required in statute for all teachers. Like other states, however, North Carolina's evaluation process does not adequately differentiate among teachers in terms of their impact on student learning. The implementation of the evaluation system varies greatly across employing systems in the state. Some school systems have addressed this lack of reliability in implementation with external observers who are content experts matched to the teacher's subject area(s). NC could invest in improving its evaluation processes to a level of robustness that could support an inference of effectiveness with student learning.

- Pros: currently exists - only improvements necessary, more holistic view of teacher effectiveness, greater opportunities for feedback and coaching, continuous improvement orientation
- Cons: costly for necessary improvements (training and content expert observation), (current) lack of validity (relative to student outcomes) and reliability, current implementation is onerous for districts and schools