

Surveying School Support and Preparedness for the 2025 Earth Science Regents Exam

Bifarella, R., Stein, D.

Dept. of Geological Sciences and School of Education, State University of New York at Geneseo



Abstract

2025 will be the first year that the Earth Science Regents exam will be administered through the framework of the New York State P-12 Next Generation Science Learning Standards. The current exam places emphasis on memorization of concepts, and the revised exam is hoping for a shift to inquiry based learning. The idea is to increase active engagement in the classroom and improve scientific literacy. This study aims to find out if there are any inequities between rural, urban, and suburban schools and the support provided to them for the new Earth Science Regents Exam. Data was collected through the use of a survey and results showed that teachers have relatively similar support from the state, their district, and within their educator team. Most teachers noted being frustrated with the lack of transparency from the state about what to expect and when to expect it. Further studies are needed to determine whether this lack of preparedness is common throughout the state. A study conducted over a longer period of time would increase the number of participants, and therefore increase the reliability of data.

Introduction

The Board of Regents adopted the New York State P-12 Next Generation Science Standards (NYS P-12 NGSS) in December of 2016, the initial transition began in July of 2017. The development of a roadmap was introduced, and given in III phases. Phase I to “Raise Awareness and Build Capacity”, Phase II “Transition & Implementation”, and lastly Phase III “Implementation & Sustainability” (Figure 1). Currently in phase III, the new shift is heading towards an inquiry-based learning approach and is aiming to encourage critical thinking, problem solving skills and literacy among students. Previously, the Earth Science Regents exam has prepared students to be assessed on memorization of concepts rather than inquiry learning. This change in the Regents exam is attempting to align with the NY P-12 NGSS framework. There is little to no information regarding what content will actually be on the exam. The reference tables for the new exam have not been released yet.

Educators around the state will need to adjust their curriculum, pacing for the year, and potentially their instructional practices. This prompted the evaluation of support that is provided to educators. This research aims to investigate support that is available to educators for the implementation of the new Earth Science Regents exam across different school settings. More specifically, seeking to discern if there is an inequity in resources provided to rural, urban and suburban schools.

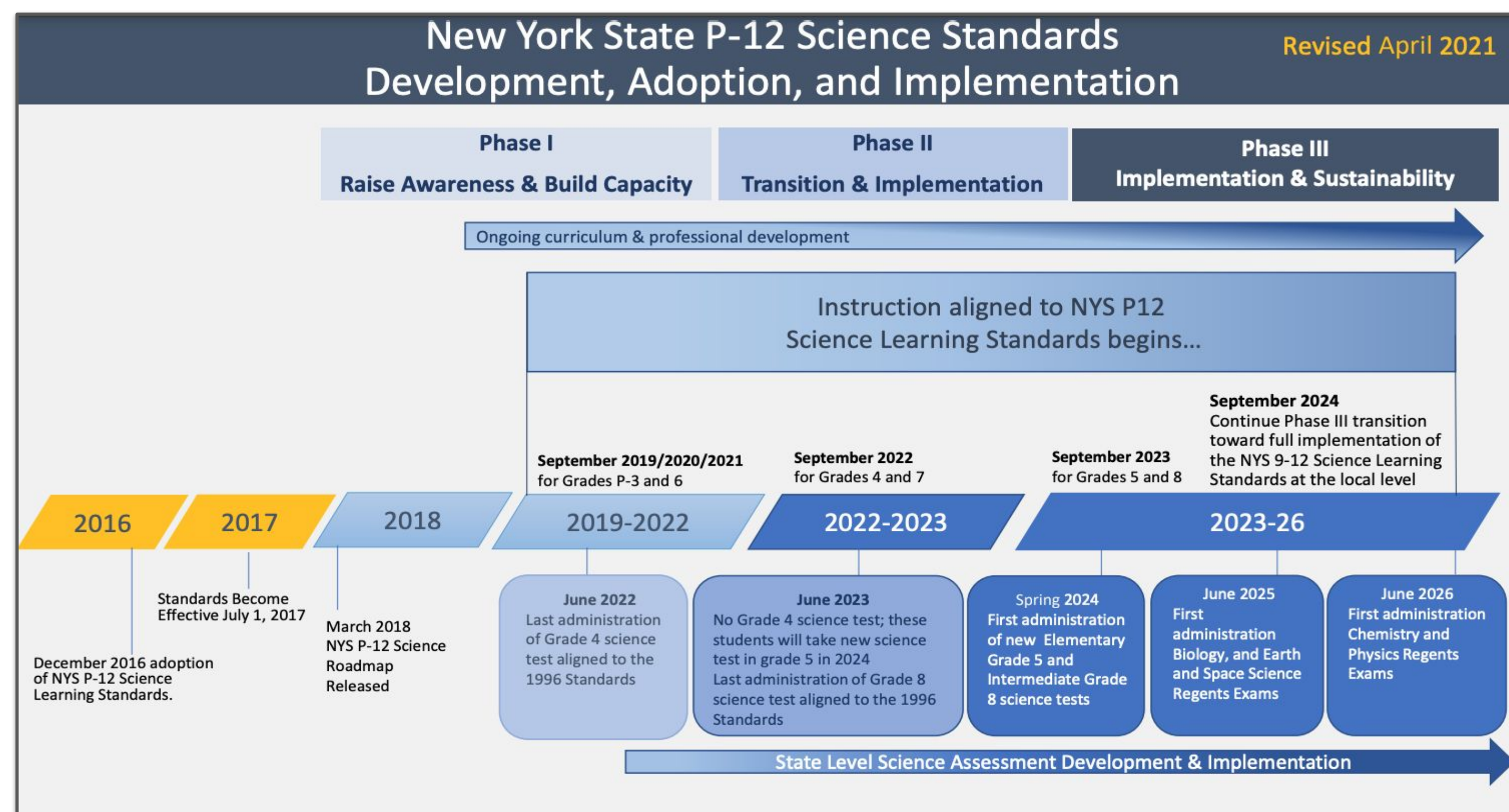


Figure 1. New York State P-12 Next Generation Science Standards road map from the NYSED website. Indicated on here are the III phase transitions for educators with respect to the instruction aligned science learning standards.

Methodology

Responses were collected via a google form after receiving approval from the Institutional Review Board of SUNY Geneseo. With assistance from Julie Troman from the Geneseo School of Education, contacts of local school district principals were received. All communication was directly to principals, and the form was forwarded from the principals to the science educator staff at each school. The google form consisted of 6 questions, aimed at measuring the percent of resources provided by the state, the district, and the staff themselves, as well as what those specific resources are. The form also gaged educators opinions on the smoothness of the transition to the new exam.

Results

Four responses were received. Of the responses, 2 were educators from rural districts and 2 were educators from suburban districts. No responses were received from urban districts. When questioned on how well supported they feel to instruct the new standards and ensure student success, all educators fell below a 4 on a 1 to 5 scale (Figure 2). The percentage of resources provided by the state, the district, and the staff is listed in Figure 3. Only one educator listed that they received no support from their district. All four educators noted that the state has provided a list of materials needed for the new state laboratory activities. Three educators, two from rural districts and one from a suburban district, said that the district has set aside money for them to order the materials and have begun scheduling professional development days over the summer to write curriculum. All four educators have begun working with their teams to create lesson plans and restructure their scope and sequence for the year. No educators have received new reference tables or any sample questions that may appear on the exam. When asked how they feel about this transition overall, educators noted feeling “rushed” and “unprepared.”

Response #	State Provided Resources	District Provided Resources	Staff Provided Resources
1: Rural	25%	50%	25%
2: Rural	25%	50%	25%
3: Suburban	25%	75%	
4: Suburban	33%	33%	33%

Figure 3. Percent of resources provided by NYS, the school district, and the staff per respondent. School type is listed next to response number.

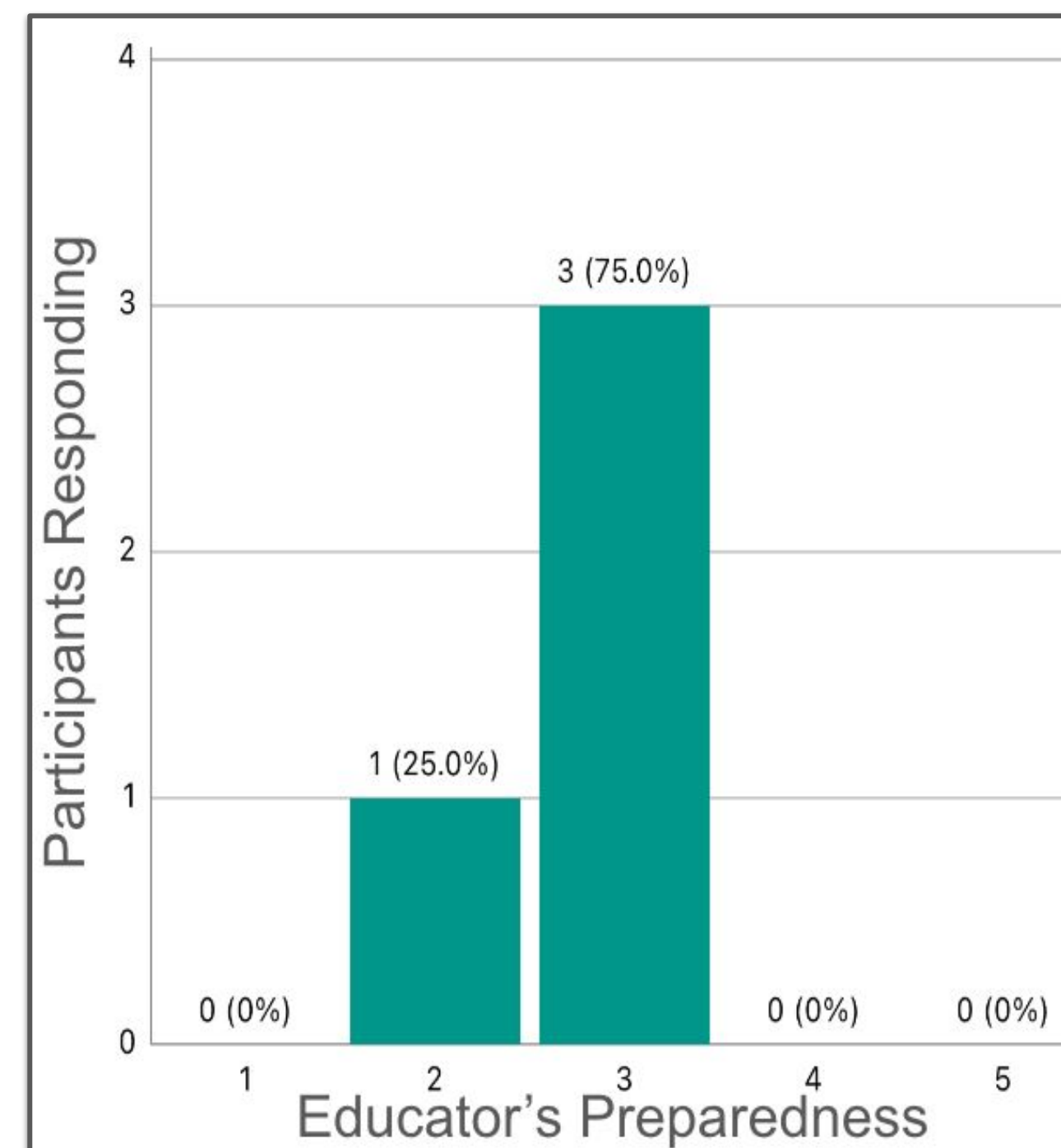


Figure 2. Response results for how well supported educator's feel to instruct new standards and ensure student success. A response of 1 is not well supported, 5 is well supported.

Discussion

Despite the fact that the transition to the new Earth Science Regents exam has been in the works since, 2016, educators who responded to this survey do not feel fully prepared to instruct their students. The short time frame that educators will be receiving resources from the state has led them to feeling rushed. One educator from a rural district said, “It would be helpful to see sample questions, the investigations, and the new ESRT (Earth Science Reference Tables) prior to the summertime for planning purposes. I think once we know what these will look like then the transition will become a lot smoother.” It's important to point out that each educator is receiving the same resources from the state at the same timeframe. There are no observed inequities at the state level for resources provided to help prepare educators for this transition. The differences lie mainly in the preparation from the district. With more time to research these differences, it is more likely that we would receive more responses and therefore increase the reliability of our data. It would be beneficial to receive responses from urban districts as well to investigate if there are any major differences in support. A study conducted over a longer period of time would also be able to investigate efficacy of educator's instruction after the exam is administered to students. A longer study could also observe if there are any changes in educator's opinions on the transition and the new examination. Overall, educators who responded to this survey do not feel fully prepared for the transition and are not sure what to expect.

Acknowledgements

We would like to thank Dr. Julie Troman for her help with obtaining contacts for our project and Dr. Dennis Showers for leading us in the right direction to get our project approved. We would also like to thank the four educators who responded to the survey. Finally we would like to thank Dr. Scott Giorgis who guided us through this project by providing his opinions and expertise.