

How ACT's Future Policies Inform Students' Preparation for the ACT Test

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Introduction

Context is important for understanding students' engagement with test preparation.¹ Studies have investigated contextual factors such as family, school, and peer support for test preparation, and results generally indicate that students with a stronger support system are more successful at increasing their scores by the use of test preparation.² One important contextual factor, often overlooked in the literature, is how a testing company's policies for test administration and score reporting might inform whether students prepare for the test, and if so, how that test preparation might take shape.

With this in mind, we sought to understand students' perceptions of and reactions to future ACT testing policies. In June, we reached out to rising high school seniors and received responses from 2,965 students.³ We wanted to better understand how, if at all, providing students with a superscore on their score report and offering a remote proctored testing option would change the way students prepared for the ACT. We asked how familiar students were with each of these policies, whether they planned to participate in the options these policies provide in the future, and whether they believed the new options would change the way they prepared for the test. Of those who said their test preparation strategies might change, we asked them to explain how, in their own words. In this paper, we share what we learned from their responses to our survey questions, including their comments made in response to an open-ended question.

Key Findings:

- Students were much more familiar with ACT's future policy of providing a Superscore on ACT score reports than they were with ACT's work in providing remote proctored testing as a testing option.
- Of those students who were familiar with at least one ACT policy, one in three (33%) told us that they believed that at least one or both of the policies would change the way they prepared for the ACT; half (50%) said that it was too soon to tell.
- Overwhelmingly, when students think of superscoring and section retesting, they do not think of them distinctively. Rather, they think of how they can work together to advance their postsecondary admissions goals. Students reported that section



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retesting would allow them to narrow their focus on weaker subjects which, in turn, would optimize test preparation to raise a subject score (and potentially their Superscore).

- Students discussed two primary test-taking strategies that would likely be implemented should they participate in remote proctored testing: understanding the format of the remotely proctored test and becoming familiar with the physical environment in which the test will be taken, i.e. what is allowed in the room in which they take the ACT.
- Many students went on to tell us about how they expected section retesting and remote proctored testing to help reduce their test anxiety.

ACT's Future Policies

In this study, we asked students to tell us about their perceptions of two future ACT testing policies: superscoring and remote proctored testing.⁴ We did not ask students about section retesting since ACT decided to postpone the launch of this feature until after the 2020–2021 academic year. However, in open-ended responses, students referred to this policy, so we include a description of it and students' responses in this report.

Superscores. To support the growing trend of students taking the ACT test multiple times, ACT score reports will now provide the option for students to send a calculated ACT Superscore to their preferred college or colleges.^{5,6} The new ACT Superscore will include the ACT scores for every test event included in the ACT Superscore, as well as the highest ACT Composite score from a single administration. The ACT Composite Superscore is calculated as the average of students' four highest subject scores across all test attempts to show the highest possible Composite score.⁷

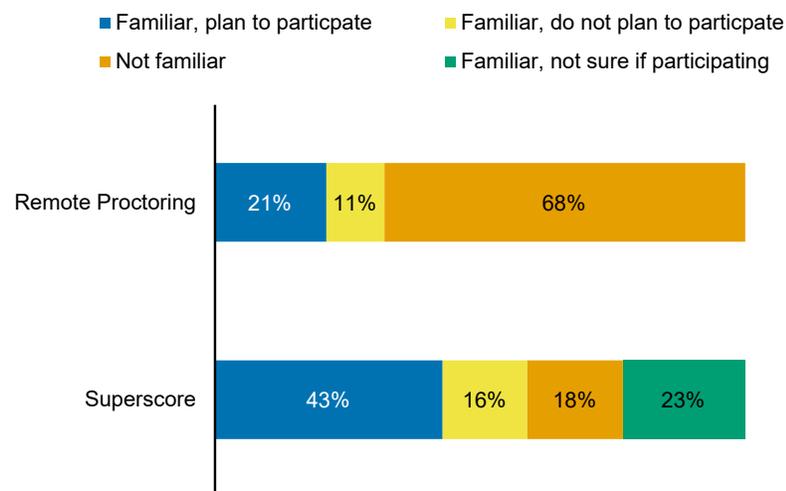
Section Retesting. For section retesting, students will be able to take between one and three section tests on a single test date.⁸ Initially, section retesting will only be available through computer-based testing at national test centers equipped for online testing. This allows students to focus their studies on areas needing improvement and spend less time testing. There will be no limits on the number of times a student may take a section retest.

Remote Proctored Testing. In 2021, ACT plans to provide national ACT test-takers with the opportunity to take the national ACT via remote proctoring. Remote proctored testing can take on many forms, including taking the test at home or a designated location where the test-taker is monitored via webcam by trained personnel and are recorded to ensure the validity of the test scores. While the details of how remote proctored testing will be implemented are still under development, it will allow students more flexibility in how they can complete the test, especially given current restrictions resulting from COVID-19.

Familiarity with and Participation in Future ACT Testing Options

Students were much more familiar with ACT's future policy to provide a Superscore on ACT score reports than they were with ACT's work to provide remote proctored testing for national administrations as a testing option. Specifically, 68% of students reported not being familiar with ACT's policy to offer remote proctored testing in 2021; this is in sharp contrast to the 18% of students who reported being unfamiliar with ACT's future policy of providing students with a Superscore on their ACT score report (Figure 1). Likewise, more students planned to submit their Superscore to a college (43%) than were planning to participate in remote proctored testing (21%).⁹ The stark contrast in familiarity and participation between the two policies might be related to the fact that students are already familiar with Superscores—both how they are calculated and what their score might be—since some colleges and universities create them on the students' behalf. In contrast, remote proctored testing is not tied to preexisting practices by colleges, it requires more effort on the part of students to participate. Furthermore, at the time survey data were collected, ACT had not yet communicated remote proctored testing plans. It is likely that students had pre-conceived notions of remote proctored testing, and applied these perceptions to their answers to the survey questions.

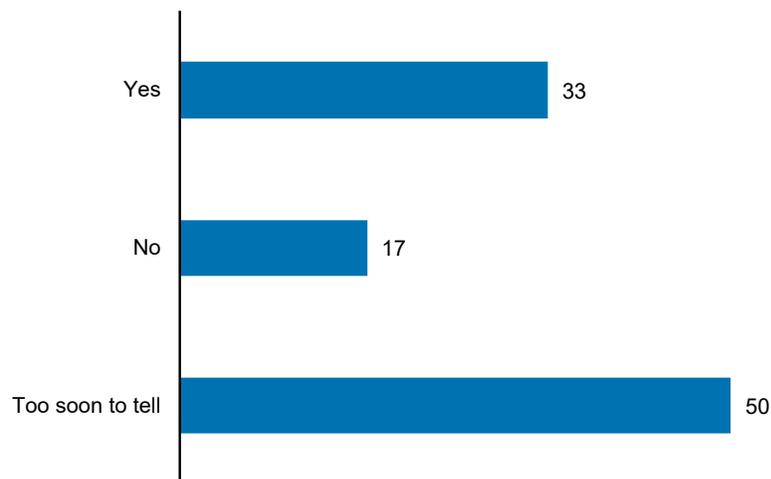
Figure 1. Familiarity with and Participation in Remote Proctored Testing and Superscore Submission (n=2,352)



ACT's Future Policies and Test Preparation

Of those students who were familiar with at least one ACT policy,¹⁰ one in three (33%) told us that they believed that at least one or both of the policies would change the way they prepared for the ACT; half (50%) said that it was too soon to tell (Figure 2).

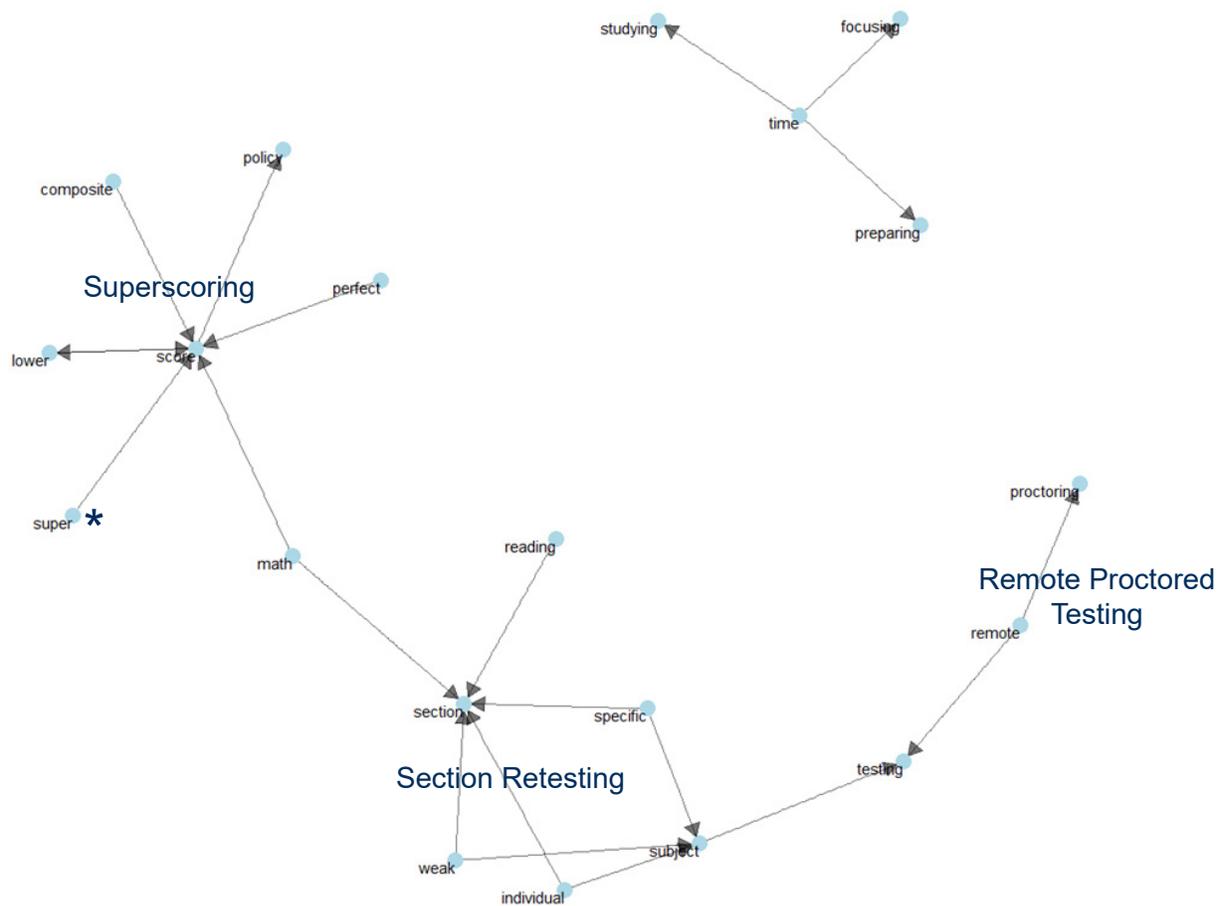
Figure 2. Whether ACT's Future Policies Will Change the Way Students Prepare (n=2,352)



Note: Figure 2 reflects only students who reported that they were familiar with at least one ACT policy and who planned on engaging in test preparation activities for the ACT in the future.

To better understand how these policies might inform students' preparation for the test, we asked students to explain this relationship, in their own words.¹¹ While 1,429 students answered this question, only those students who discussed how the policies related to test preparation (n=579) were analyzed.¹²

In order to better understand students' responses related to the use of forthcoming ACT policies, we constructed a visual network to represent the relationship between word responses and the identification of key themes in students' responses.¹³ Figure 3 illustrates the word network relating students' use of test preparation activities and the new policies.

Figure 3. Analysis of how ACT's Future Policies Relate to Test Preparation Strategies (n= 579)

Note: Test anxiety is omitted from this figure. While students referred to this issue in their open-ended responses, analysis of the data showed that the topic was referenced in the three identified themes.

* Indicates the relationship between “super” and “score” was stronger than the others.

What follows is a summary of the findings to the open-ended responses aligned to the three themes illustrated in Figure 3, which are (a) Superscores, (b) section retesting, and (c) remote proctored testing. We start with an analysis of Superscore reports and section retesting and their impact on how students plan to engage with the ACT test. We then move on to the relationship between remote proctored testing and test preparation. Students connected policies by explicitly referencing how they interplay with their anxiety levels while preparing for and taking the ACT. Given this, we elaborate on this connection in the paper.

Superscores and Section Retesting

Overwhelmingly, when students think of superscoring and section retesting, they do not think of them distinctively. Rather they think of how they can work together to advance their postsecondary admissions goals. In other words, they think of strategies

to use section retesting to optimize Superscores. In our survey, it was rare for a student not to speak of these two policies together.

The section retesting policy requires that a student take all four ACT subject tests in one sitting prior to participating in section retesting. It may be for that reason that many students plan to take the full test both to understand their baseline performance and to identify areas for improvement. They then plan to retest multiple times. After the first administration and the identification of weaker subject areas, students plan to focus their test preparation on weaker subject areas. For example, one student commented:

The first time, I would evaluate my strengths then focus on studying for the section I struggled with. After that, I would retest on only the section I struggled with.

This narrow focus on weaker subjects allows students to optimize test preparation to raise a subject score (and potentially their Superscore). As another student noted:

The section retakes will allow me to study for certain sections that I struggle with and get a better score in order to improve my superscore.

A key advantage to this type of targeted test preparation is that students do not spend time preparing for a subject in which they already performed satisfactorily. It is for this reason that analysis of open-ended responses showed a section on the network diagram dedicated to “time” for “preparing,” “focusing,” and “studying.” One student articulated this connection:

I may choose to take the ACT multiple times, each time focusing on a different section of the test since it will be super score anyway. That way I can focus my prep time more as well.

Remote Proctored Testing

Students discussed two primary test-taking strategies that would likely be implemented should they participate in remote proctored testing: understanding the format of the remotely proctored test and becoming familiar with the physical environment in which the test will be taken, i.e. what is allowed in the room in which they take the ACT. We highlight these approaches next.

Understanding the format of the remote proctored test. Students who referenced the need to become more familiar with the test format often made generic statements like this student response:

If the format of the test changes with remote proctored testing, it would be helpful to be able to take a practice test with the same format.

Most students who referenced understanding the test format implicitly or explicitly indicated that they would have to become more familiar with taking the test online. In this respect, becoming familiar with the test format was synonymous with taking an online practice test. For example, one student said:

With the remote proctoring, students will have to learn (such as myself) how to take test online. As for some (such as myself) testing online is far more difficult because I lack the traditional test-taking ways of paper and pencil that I seem to perform better with.

Another student expressed the issue in this way:

If a remote option is available, test prep may become more online than on paper. Which is fine, but we would need to get used to the test on the screen as well as staring at a screen for 4 continuous hours.

While the prior comments focus on practicing testing online—including preparing for taking a test for an extended time on a computer—other students were more specific about the strategies they would employ should they have to take the test online. This includes figuring out how to apply paper-and-pencil strategies to an online format like learning how to underline key text, how to flag items for later review, keeping track of time, and returning to an earlier part of the test. One student said:

Because the test could be on a computer, I would want to know the format. What is on the screen? Is there a timer? Do we get a review page at the end? Can we flag questions? Other things like that regarding the computerized test.

Likewise, students indicated that they would like to participate in online test preparation programs so that the format of the test preparation mimicked the format of the test.

Becoming familiar with the physical test-taking environment. Some students provided generic explanations for needing to become more familiar with the physical test-taking environment as a test preparation strategy. For example, two students put it this way: “I think I’ll have to realize and prepare for a different test taking environment” and “my test taking environment will change so my test prep will change.”

Other students equated the test-taking environment to taking a test at their home and the challenges that need to be overcome in order to prepare to take a test in that environment. This means that students would have to get in the right “head space” to take a test at home where things may be loud and chaotic. Students indicated that they would have to designate quiet time to complete the test, ask family members to leave the house or remain quiet, and designate a room where the student would be uninterrupted for an extended period of time. One student said:

ACT’s home proctoring addition will require to find an area in which is completely quiet in your house or just get used to the noise produced by your household.

A few students also indicated that they would have to ensure that only they were on the internet since sharing internet bandwidth would disrupt the test-taking experience. One student said this:

With remote proctoring, especially if it's at home, I would need to make sure everyone is off the internet in order for me to take the test as well as go through certain material I may have forgotten which I could find online.

Test Anxiety

While not explicitly part of the findings of the open-ended responses visualized in Figure 3, many students went on to tell us about how they expected section retesting and remote proctored testing to help reduce their test anxiety. One student noted:

I have severe anxiety and it affects my test taking abilities. I believe taking the tests multiple times each is my way to compensate for that.

One of the common reasons students expected this reduction in anxiety was that they would be able to focus their preparation efforts only on the subjects they needed to improve. As another student noted, "It also takes away the stress that I might do worse at the other section I thought I did well in originally." In doing so, they would not need to worry about performing poorly on a section that they had previously performed well on. In fact, most students felt that, in their prior experience taking the ACT, they had performed below their desired performance on the mathematics and science sections. Many students felt relieved to be able to focus on these two subject areas while being assured that they would not hurt their prior performance in English and reading. Additionally, because of the greater demands being placed on their time by school, work, and home commitments, being able to focus their test preparation was viewed as a way to better manage their time, especially now given the challenges brought on by the COVID-19 pandemic. For example, another student noted, "I think this will help in managing my time efficiently while balancing schoolwork and college applications."

In the case of remote proctored testing, students said that they expected a reduction in test anxiety because of being able to test at home in a more familiar environment. These students felt that this reduction in anxiety will allow them to redirect their efforts to further test preparation.

I think if we're taking the test at home it will not only let more kids feel at ease but also provide them with more confidence considering the familiarity of the setting. As well as give them as much time as needed to prepare their test taking areas and prepare themselves for the test.

Final Thoughts

We found diverse perspectives on the relationship between new ACT policies and students' preparation for the ACT test. We were surprised to find that students were thinking about some of these policies jointly. For example, among the students we heard from, very few made a distinction between superscoring and section retesting. In

fact, they viewed both policies as a single strategy to attain a higher ACT Superscore.¹⁴ Among the three policies examined, these two policies were most familiar to respondents.

If students believe that utilizing superscoring will increase their likelihood of admissions or scholarship attainment, then superscoring is viewed as useful to them. However, while students can use section retesting and superscoring to present their best results on the ACT, some colleges may only use ACT scores from a single test administration. If a student applies both to schools that do and do not accept Superscores, this complicates a student's decision to use section retesting. More specifically, students will be unable to use scores obtained through section retesting for some of these schools.

We found that few students were familiar with the remote proctored testing policy that ACT is currently developing. Among students who did have a perspective on remote proctored testing, their expectation was to have in-home proctored ACT exams. Some students' thought that a proctored exam would allow for an on-demand experience. While the COVID-19 pandemic has upended many standard procedures, ACT always seeks to meet the diverse needs of students. We envision remote proctored testing as a key to assisting with this goal.

It will be important to consider the advantages and disadvantages that these new policies may have on students from underserved populations. Testing multiple times presents a potential new financial burden on low-income students, for example. One of the ways that ACT is attempting to mitigate such factors is increasing the number of test fee waivers available to such students.¹⁵ Waiving the fee for more test administrations will allow underserved populations to take advantage of the benefits of repeat test-taking.

Each of the three policies being deployed are meant to address existing difficulties for students. For example, superscoring is one way that student can highlight their best performance across multiple examinations. Students told us that being tested on one subject allows them to focus their efforts and, therefore, decreases their anxiety. Similarly, subject retesting allows a student to focus their efforts on particular subjects to ensure that they are doing their best and avoiding issues related to test fatigue.¹⁶ Remote proctored testing helps to alleviate the concerns regarding limitations of testing sites, which is a particular problem during the present COVID-19 pandemic.

Some students revealed that it is too early to decide whether and how to make use of these new policies once they are deployed. To the extent that it is possible, we have described how students currently feel about these potential policy deployments. Based on what we have learned in this study we propose potential ways we can support students going forward. Students might be provided with explicit communication, for example, as to what remote proctored testing will and will not entail, including the scheduled days for remote proctored testing. Students might also be provided with best practices for how to create a home testing environment that decreases noise and distraction. Likewise, students might be provided with ideas on how to strategically choose the subject tests they plan to re-take, and when.

Notes

1. Heather M. Buzick, Rhoad-Drogalis, Anna, Laitusis, Cara C., and King, Teresa C., "Teachers' Views of Their Practices Related to Common Core State Standards-Aligned Assessments," *ETS Research Report Series 2019*, no. 1 (December 2019): 1-18; Alberta Raymond, *Southeastern High School Teachers' Perceptions and Experiences in Preparing Students for Required Standardized Testing* (Dissertation, Walden University, 2016); John A. List, Livingston, Jeffrey A., & Neckermann, Susanne, "Do Financial Incentives Crowd out Intrinsic Motivation to Perform on Standardized Tests?," *Economics of Education Review* 66 no. C (2018): 125-136.
2. Alanka P. Brown, "Noncognitive Variables and Their Impact on Enrollment of African American Males in Higher Education," (Applied Dissertation, Nova Southeastern University, 2009); Jee Sun E. Kang, *Depth and Breadth: Bridging the Gap Between Scientific Inquiry and High-Stakes Testing with Diverse Junior High School Students* (Dissertation, University of California, Santa Barbara, 2009); Frances M. Smith and Hausafus, Cheryl O., "Relationship of Family Support and Ethnic Minority Students' Achievement in Science and Mathematics," *Science Education* 82 no. 1 (January 1998): 111-125; Nanez, L. G. (2015). *Texas high school seniors: The path of students who fail the first administration of End of Course exams and eventually meet standard and graduate* (Publication Number 10110337). [Doctoral dissertation, Lamar University-Beaumont]. ProQuest Dissertations Publishing.
3. A total of 70,000 incoming high school seniors (class of 2021) were randomly selected to participate in an online survey from a total of 667,202 US students who registered to take the ACT as a junior between September 2019 and June 2020. A total of 2,965 answered at least 80% of the survey and identified themselves as male or female, which was used as our analytical sample (4.2% response rate). We required gender to be answered so that we could appropriately weight the sample. Each analysis was completed using normalized weights to compensate for the differences in sample size in each analysis, as well as the over-representation of both female respondents and respondents who took the ACT closer to the time the survey was sent out in June 2020. For information on the population, sampling, and weighting see Shiloh Howland, Moore, Raeal, and Sanchez, Edgar I., *Impacts of COVID-19 on Incoming High School Seniors' Postsecondary Plans* (Iowa City, IA: ACT, 2020), <https://www.act.org/content/dam/act/unsecured/documents/R1853-Impacts-of-Covid-HS-2020-12.pdf>
4. Readers interested in learning more about the new ACT test options under development can learn more at <https://www.act.org/content/act/en/new-act-options.html>
5. Students will also have the option to send a score report which does not include the Superscore.
6. Superscoring has demonstrated the least amount of prediction error by number of testing occasions as compared to using the average across testing occasions, the most recent score, or the highest score. Among these scoring methods, superscores also have the largest correlation with freshman GPA and does not result in a less diverse admitted class than the other three methods.

Krista Mattern, Radunzel, Justine, Bertling, Maria, and Ho, Andrew D., "How Should Colleges Treat Multiple Admissions Test Scores?" *Educational Measurement: Issues and Practice* 37 no. 3 (2018): 11-23.

7. Superscore calculations are available for all subject test and the Composite score.
8. Research has found that students earn similar ACT section test scores when taking a test section first as compared to the typical test position or another testing position, that taking subjects tests on different days doesn't result in higher than expected scores, and that students tend to perform as expected when retesting in a single ACT subject area.

Krista Mattern and Steedle, Jeff, *Students who Take the ACT Test Sections in a Different Order Earn Similar Scores* (Iowa City: IA, ACT, 2020). Retrieved from: <https://www.act.org/content/dam/act/unsecured/documents/R1822-section-order-10-2020.pdf>; Wayne J. Camara and Allen, Jeff, *Does Testing Date Impact Student Scores on the ACT?* (Iowa City, IA: ACT, 2017).

9. Students were asked two questions. First, they were asked how familiar they were with the policy. Second, they were asked if they knew whether they would submit their Superscore to a college and/or how many times, if at all, they planned to participate in remote proctoring. The data from these two sets of survey questions were combined and presented in the current paper.
10. We restricted this question to only those who said that they were familiar with remote proctoring because we were interested in seeing whether the potential for engaging in these policies might change their test preparation approach, even if they might not participate. Most of the students who chose "no" for this question were those students who did not plan to participate in the policy or policies. Students had to have also indicated that they planned to participate in test preparation activities in the future in order to receive this question.
11. Students had to have chosen "yes" or "too soon to tell" to the prior question in order to receive the open-ended question asking them to "Please use the space below to explain how you think ACT's future policies might change how you prepare for the ACT test."
12. The second author of this paper read each open-ended response and manually coded whether the respondent talked about remote proctoring, section retesting, and/or superscoring. Only those responses that made an explicit connection to how these policies related to their test preparation were coded. Other statements, for example, those comments that spoke to whether students liked or disliked the policy or the potential consequences that the policy might have on the validity of the scores, were not coded since these comments were not of focus for this paper.
13. Figure 1 displays a bigram network. In this analysis, word cooccurrence is analyzed in order to identify the most frequently used pairs of words. The cooccurrence frequency is then used to create a visual representation of the relationship between all words. What is presented in Figure 1 has been cleaned of extraneous bigrams and limited to cooccurrences of 2,000 mentions. While these extraneous bigrams

were removed from the visual, they were an important contextual component to interpreting the identified themes. Furthermore, key words were reduced from their conjugated form to their root form. For example, scoring, scores, and scored were converted to score and weaker and weakest were converted to weak. This was done to facilitate a more visually interpretable bigram network. It is important to note that students' statements may be represented in multiple areas depending upon the word cooccurrence.

14. While we asked specifically about the use of section retesting in the context of superscoring, students who take the full ACT test also have the option to submit a Superscore.
15. Fee Waiver eligibility requirements can be found at <http://www.act.org/content/dam/act/unsecured/documents/FeeWaiver.pdf>
16. Research has demonstrated that students' subjective test fatigue has been shown to increase with longer testing administrations as would result from taking the full ACT test versus individual section tests even though the effect on score performance of longer test administrations does not appear to be negative.

Phillip L. Ackerman, and Kanfer, Ruth, "Test Length and Cognitive Fatigue: An Empirical Examination of Effects on Performance and Test-Taker Reactions," *Journal of Experimental Psychology: Applied* 15, no. 2 (2009): 163–181. <https://doi.org/10.1037/a0015719>

Jinghua Liu, Allspach, Jill R., Feigenbaum, Miriam, Oh, Hyeon-Joo, and Burton, Nancy, "A Study of Fatigue Effects from the New SAT," *ETS Research Report Series* 2004, no. 2 (August 2004).

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