

Recommendations from the Illinois Technical Advisory Committee (TAC): A Report to the Illinois State Board of Education

June 30, 2019

This report was prepared by Chris Domaleski and Erika Landl of the National Center for the Improvement of Educational Assessment. The recommendations described in this report are intended to reflect the contributions and perspectives of the full TAC.

Introduction

Illinois' Consolidated State Plan (CSP) under the Every Student Succeeds Act (ESSA) was approved by the US Department of Education (ED) in August of 2017. The plan outlines the Illinois State Board of Education's (ISBE) goals for student learning and describes a system of school identification, support and improvement focused on achieving those goals. In 2018 ISBE worked with the National Center for Assessment (Center for Assessment) to assemble and facilitate an independent technical advisory committee (TAC) with expertise in the design and implementation of accountability systems. The TAC was commissioned to work with the existing state ESSA plan, understanding the policy priorities reflected therein, and provide recommendations to support the state goals and values. In June of 2018 a document summarizing the TAC's recommendations was presented to the State Board of Education.

In spring of 2019 the TAC reconvened to continue and extend its work. During this time the TAC provided recommendations focused on supporting: ongoing evaluation and refinement of the state's assessment and accountability system, clarification and refinement of the state's system of support and IL's transition to a new assessment in Science. During April and June of 2019, the TAC met on three separate occasions, including two in-person meetings in Chicago, IL and one virtual meeting.

This report, provided by the Center for Assessment to ISBE, describes the process and data used to inform the TAC's discussions and summarizes the TAC's overarching recommendations and their rationale.

The Role of the TAC

The Illinois Technical Advisory Committee was established in 2018 to serve as an advisory group to ISBE as it worked to refine, operationalize and evaluate the state's plan under ESSA. The TAC comprises eight technical and policy leaders with a diverse array of perspectives and a broad range of experience, including three members who work and reside within the state of Illinois.

Specifically, the charge of the TAC can be defined as follows:

- to provide recommendations that serve to bolster the technical defensibility of IL’s assessment and accountability systems;
- to propose research and analyses that inform ongoing evaluation of the assessment and accountability systems;
- to propose potential enhancements and/or improvements to current systems and procedures for ISBE’s consideration, and
- to identify potential areas of concern or gaps in understanding.

The TAC understands that its recommendations may be accepted or revised by ISBE as deemed appropriate. The members of the TAC and their affiliations are listed in Table 1. Short bios for each TAC member are provided in Appendix A.

Table 1. TAC Members and Affiliations

Name	Affiliation
Jeffrey Broom	Director of School Quality Measurement and Research, Chicago Public Schools
Dr. David Conley	Professor of Educational Policy and Leadership in the College of Education at the University of Oregon; Director of Center for Educational Policy Research; Founder of EdImagine
Dr. Chris Domaleski (co-facilitator)	Associate Director at the National Center for the Improvement of Educational Assessment
Dr. Laura Hamilton	Distinguished Chair in Learning and Assessment and Senior Behavioral Scientist, RAND Corporation; Professor, Pardee RAND Graduate School
Dr. Erika Landl (co-facilitator)	Senior Associate at the National Center for the Improvement of Educational Assessment
Dr. James Pellegrino	Co-director of Learning Sciences Research Institute, Liberal Arts and Sciences Distinguished Professor, and Distinguished Professor of Education at the University of Illinois at Chicago
Dr. Mike Russell	Associate Professor, Boston College, Lynch School of Education, Senior Research Associate at the Center for the Study of Testing, Evaluation, and Educational Policy
Dr. Diana Zaleski	Instructional Resource and Professional Development Director Illinois Education Association

Meeting Topics

From April to June of 2019, the TAC convened three times. Table 2 presents a brief summary of the topics addressed at each meeting.

Table 2. Topics Addressed During IL TAC Meetings

Meeting Date/ Location	Topics Addressed
April 2 Webinar	<ul style="list-style-type: none">• Overview of ESSA accountability system and procedure for implementation in 2019.• Summary of schools identified for support based on 2018 implementation.• Procedures and timeline for scoring and reporting the new Science achievement indicator.
April 25-26 In-Person	<ul style="list-style-type: none">• Overview of the Illinois Assessments in ELA, Math and Science.• Performance of each of the indicators in IL’s ESSA accountability system based on scoring procedures implemented in 2018.• Procedures for scoring the school climate indicator and including it in 2019 accountability calculations.• The implications of increasing interim achievement targets on ELA and Math indicator scores and the overall school index.
May 28-29 th In-Person	<ul style="list-style-type: none">• Comparability of scores across computer and paper-based administrations of the IAR in ELA and Math.• Relationship between administration time and student performance.• Options related to the development, calibration, scoring and reporting of the new Illinois Science Assessment in 2020 and 2021.• Highlighting and extending IL’s system of school support to facilitate pathways for improvement.• Potential implications of increasing achievement targets for IEP.

Structure of the Meetings

Prior to each TAC meeting, the facilitators from the Center for Assessment worked with ISBE to assemble relevant research, conduct analyses and simulations, and prepare presentations reflecting different design options and considerations relevant to the set of topics noted in Table 2.¹

During the meetings, the facilitators guided discussion on the topics and captured meeting notes to document recommendations reflecting majority perspectives shared across the group and highlight areas of dissent if applicable. After each meeting, TAC

¹ ISBE makes the agenda and materials for meetings available at:
<https://www.isbe.net/Pages/AccountabilityTechnicalAdvisoryCommittee.aspx>

recommendations were summarized and provided to the TAC for review and approval via meeting notes or draft versions of this report

To ensure transparency, all meetings (both face-to-face and virtual) were open to the public and a period of time was set aside to allow for public comment. During this time, members of the public were provided with an opportunity to verbally share their thoughts and opinions with ISBE and the TAC. At no time were meeting attendees denied an opportunity to voice a perspective during public comment.

TAC Recommendations

The following sections summarize the TAC's discussions and recommendations based on the range of topics addressed this spring. They are organized under three broad headings: Assessment, Accountability System Design and Additional Considerations.

Assessment

As shown in Table 2, there were several assessment-related topics brought to the TAC for discussion this spring. These topics addressed both existing and anticipated design and implementation considerations in ELA, Mathematics and Science.

ELA and Mathematics

To inform discussions around ELA and Mathematics, representatives from New Meridian and Pearson were invited to present to the TAC. During the first face-to face meeting, Tracy Gardner from New Meridian provided the TAC with an overview of the Illinois Assessments of Readiness in ELA and Mathematics. She discussed the design of these assessments (e.g., test length and structure, item types) and the types of inferences they were developed to support. In May, a research scientist from Pearson presented research to the TAC on mode comparability and the relationship between test administration time and performance.

In both cases, the TAC was encouraged to ask questions and recommend areas for future research to ensure results from these assessments could be used and interpreted as intended. The TAC's comments and recommendations related to the topics discussed are provided below.

Summary of TAC Discussions and Recommendations

Evaluating the Impact of Different Test Blueprints in ELA

Within each grade, there are two blueprints that support the development of ELA test forms. The blueprints are identical except for the type of task a student receives - literary vs. narrative. The use of two blueprints raised questions from the TAC about comparability, specifically as it relates to estimates of student growth. The TAC recommended that ISBE conduct analyses to evaluate whether the patterns of growth demonstrated by students taking different pairs of forms/prompts across years exhibit the same characteristics. This could be done by comparing growth distributions for

students taking different combinations of forms/prompts across years, as represented in the table below.

Pathway	Grade/Prompt	Grade/Prompt
1	4/Narrative	5/Narrative
2	4/Narrative	4/Literary
3	4/Literary	5/Literary
4	4/Literary	5/Narrative

Mode of Administration

At the May meeting the TAC reviewed evidence assembled to evaluate the potential short-term impact of transitioning between modes (i.e., paper and computer) on Illinois students' performance in ELA and mathematics. To inform this discussion, a representative from Pearson summarized the results of mode analyses conducted in previous years and their implications for the scoring and reporting of PARCC assessment results. Subsequently, the TAC discussed the design and results of the current analysis which focused on the impact of transition between modes (i.e., paper to computer, computer to paper) using IL assessment data from spring of 2017, 2018 and 2019.

These analyses suggested that, on average, school performance decreased in the year after transition from paper to computer-based testing, especially at the lower grades. In consideration of these results and the data used to support them, the TAC recommended additional analyses focused on better understanding the magnitude of impact and establishing potential options for mitigating impact on accountability determinations during the transition year. Suggested analyses include:

- re-evaluating the potential impact of transition from paper to online using more comparable samples than what was used for the original study;
- evaluating differential impact of transition by student group;
- estimating the predicted impact of transition on student growth percentiles at the individual and school level;
- evaluating different procedures for adjusting student or school level growth measures for transitioning schools (i.e., safe harbor); and
- evaluating the fidelity of a uniform mode adjustment procedure for all types of schools (e.g., those with low/medium/high rates of free and reduced-price lunch students).

In addition, since performance on writing seemed to be impacted the most by the transition from paper to computer, the TAC recommended that IL consider developing

materials and resources that help districts and schools prepare students to take the writing test online prior to the transition.

Finally, in reviewing these results the TAC noted that, schools serving greater proportions of free and reduced-price lunch students tended to be less likely to transition students (especially those in Grades 3 and 4) from paper to computer. Although the number of schools that have not transitioned to computer is relatively small, the TAC indicated that the state should acknowledge and work to address this issue, especially in the lower grade levels, as it could threaten the equity of the accountability system by systematically impacting certain types of schools. Since the factors influencing decisions to transition differ by district/school, the TAC suggested that IL help districts develop individualized plans of action for schools having low transition rates in one or more grades.

Timing Analyses

In 2019 IL administered a shortened version of the PARCC assessment and the overall administration time was reduced. In light of inquiries about speededness in mathematics, the TAC was asked to evaluate data collected to explore the relationship between test administration time and performance for this content area. These data, provided by Pearson, reflected the average amount of time spent on each unit of the math assessment (in grades 3-8) for students at different ability levels. While the TAC did not believe that the data provided suggested the amount of time allotted was inappropriate or disadvantaged students at different ability levels, it suggested follow up analyses be conducted to better understand: 1) the characteristics of students requiring additional time; 2) how time was being spent; and 3) the types of items demanding the most attention. These analyses may include the calculation of omit rates for items at the end of the assessment, average time spent on different types of items (i.e., for all students and students at different ability levels) and how much time students spend engaged in item review after completing the last item on the test. This information will help ISBE provide better support to districts and determine if modifications to administration times are needed in the future. If, for example, analyses suggest that students spend a significant proportion of testing time on a particular type of item the state can provide guidance to districts that helps students prepare for that item type.

Science

On April 17th the IL State Board of Education authorized the State Superintendent to approve the proposed science assessment blueprint at grades 5, 8, and 11 for a fully redesigned Illinois Science Assessment (ISA). This blueprint represents a set of principles and design constraints for the assessment and will serve as the foundation for science assessment item-writing and test development for school year 2019-20 and future years.

At the April meeting, ISBE provided the TAC with an overview of the revised Science blueprint and discussed the state's proposed timeline for development, piloting and implementation of the new ISA. ISBE indicated that the current version of the ISA (aligned

to the old blueprint) was administered in spring of 2019, a new test developed using a combination of licensed and potentially existing ISA items would be administered in 2020, and the first test fully aligned to the new ISA Science blueprint would be administered in 2021. The state also reiterated its plan to include the science achievement indicator in the state's accountability system starting in 2018-2019, as reflected in its consolidated plan under ESSA².

The TAC was asked to provide feedback on how the assessments should be designed, scored and reported throughout the transition to support the use of results as part of the state's accountability system and mitigate stakeholder confusion and distrust. Multiple options were provided for TAC discussion and consideration. The options considered not only the design of the assessments in 2020 and 2021 (i.e., proportions of existing, licensed and new ISA items), but the procedures used to establish performance standards and rate school performance for inclusion in the accountability system.³

Consistent with best practice in educational measurement, the TAC strongly recommended that ISBE take multiple years to design, develop and field-test its new science assessment. This is necessary to ensure the assessment is technically sound and measures the next generation science standards (NGSS) as intended. It also allows for modifications to the assessment design, blueprint and administration timeline, if deemed necessary, prior to the first operational administration. A full summary of the TAC's recommendations related to the development and implementation of the new Illinois Science Assessment is included as Appendix B.

Accountability System Design

In 2018 the TAC provided recommendations that informed the implementation of the IL ESSA accountability system. In spring of 2019 the TAC was provided with an overview of the final set of procedures and business rules implemented to produce school index scores, assign Tier designations, and identify schools in need of support. In addition, to evaluate the impact of these procedures and identify where modifications may be necessary, a range of data and analyses were provided for review, including:

- tables and plots summarizing the performance of schools and student groups on the overall ESSA school index;
- summary statistics for schools identified as Exemplary, Commendable, Underperforming and Lowest Performing (i.e., Tier 1-Tier 4);

² See the related discussion around scoring of the science indicator in the section labeled *Accountability System Design*

³ Importantly, the TAC endorsed ISBE's plan to include science in the accountability system beginning in 2019.

- indicator performance distributions and summary statistics (for all students and select student groups);
- correlations between indicator scores; and
- correlations between indicator scores, school enrollment (i.e., N-size) and percentage of low-income students.

The TAC discussed these results in general and specific to the topics identified by ISBE for TAC consideration. In many cases the data served to identify areas that required additional analysis or future consideration (i.e., when additional years' worth of data would be available). A summary of the TAC's recommendations related to the accountability issues discussed this spring is provided below.⁴ When appropriate, specific data and analyses that influenced or informed the TAC's recommendations are described.

Scoring of the Science Achievement Indicator

IL's consolidated plan indicates that performance on the Illinois Science Assessment (ISA) will be included in the state's accountability system beginning in 2018-2019. Due to the planned transition from the current version of the ISA to a test aligned to the new ISA blueprints in 2021, ISBE requested the TAC's opinion related to both the procedure and timeline for inclusion of the Science indicator within the state's accountability system. ISBE indicated that its preference was to include the Science achievement indicator starting in 2019, using a procedure similar to that employed for ELA and Mathematics if this was deemed fair and appropriate⁵.

At the April TAC webinar the TAC reviewed the process used to calculate and score the ELA and mathematics indicators. This process awards 100 points if the annual achievement target is met or proportional points if the target is not obtained. Subsequently, data from the 2016-2018 ISA administration was used to model illustrative interim targets and science indicator scores in Grades 5 and Biology. This was done for all students as well as the low-income and IEP student groups. The baseline target was set at the average science proficiency rate calculated using data from 2016-2018. Interim targets were based on a long term proficiency rate goal of 90% by 2033.

Modeled results suggested that, on average, science indicator scores calculated using 2018 data would be relatively high for all three groups of students due to schools meeting or exceeding the baseline target (i.e., receiving 100 points). This is consistent to what was observed in ELA and Mathematics. For a large percentage of schools and student groups it was relatively easy to achieve the interim target so the maximum number of points was

⁴ A memo summarizing the TAC's' recommendations for including the science and school climate indicators in the accountability system in 2019 was provided to ISBE on June 10th and is included as Appendix C.

⁵ The Illinois science assessment is currently administered in grades 5, 8 and 11, so growth in Science is not part of ISBE's ESSA accountability system.

awarded. The TAC indicated that performance in all three content areas may be greatly affected for all schools and student groups as the interim targets became more rigorous and suggested this effect be modeled for consideration at a future meeting⁶.

Summary of TAC Recommendations

To minimize confusion and maintain as much consistency as possible, the TAC agreed that the procedure used to score the ELA and math indicators should be applied to the science achievement indicator when it enters the system. In terms of the timeline for inclusion, the TAC indicated that this was primarily a policy decision, but if the indicator was incorporated into the system in fall of 2019, as planned, communication and continued scrutiny of the scoring procedure should be prioritized while the test continues to transition.

Climate Survey Inclusion and Scoring

In 2017-2018 schools were not required to administer a school climate survey. Since the school climate indicator is based upon participation rate, many schools did not have data to contribute to this indicator. For this reason all schools, even those that did not administer a survey (i.e., 0 participation due to no attempt) received full points (i.e., 5) for this indicator as part of the 2018 school index score calculations. For 2018-2019 all schools are required to administer an approved climate survey, so this indicator will be scored for all schools based on participation. The TAC was asked to provide guidance around the procedures for scoring this indicator as well as how to deal with a small percentage of schools for which student participation was not linked to demographic data (i.e., participation was not rostered at the student level).

Summary of TAC Recommendations

Inclusion of All Schools

The TAC agreed with ISBE's proposal to score and include the school climate indicator in the system for 2019. In order for all schools to be included in these analyses, the TAC suggested that ISBE send a roster to the small number of schools--approximately 5%--for which demographic data was not collected as part of the survey process. The roster can be used to indicate which students participated in the survey and submitted back to the state. The roster should indicate the number of students who participated in the climate survey, as reported by the vendor, so that schools can verify that the number of students identified as participating is accurate.

⁶ See the section labeled "Implications of Increasing Targets for Academic Achievement"

Scoring of the School Climate Indicator

In 2018 the TAC provided an initial recommendation for scoring school participation on the school climate survey⁷. At that time the TAC indicated that this recommendation should be revisited once participation data from the 2017-2018 school year were available. Although the school climate indicator was not scored in 2018, for schools that administered a climate survey, participation data was available. After reviewing these results the TAC developed a proposal to score participation on the school climate survey for inclusion in the accountability system:

- Award 95-100% participation a score of 100.
- Award 50-94% participation a score based on linear interpolation from 0 to 100, where 50=0 and 95=100; all increments in between are in equal intervals.
- Below 50% participation, or no administration, receives a score of 0.

After reviewing the application of these rules to score elementary and high schools the TAC indicated that results were appropriate and reasonable. Reaching the target participation rate was demonstrably feasible and only likely to increase over time based on the experience and judgment of some members of the TAC. The recommended scoring rules also serve to communicate the high priority of administering a school climate survey and obtaining participation rates above 50%, as values below this threshold were viewed as too low to provide meaningful inferences from the data.

Finally, while the school climate indicator is currently based on participation rate if, in the future, the decision is made to score this indicator using student response data (i.e., the school climate score) the TAC indicated that a common school climate survey should be identified by ISBE for administration to all schools.

⁷ See page 8 of the 2018 memo to the Illinois State Board of Education
<https://www.isbe.net/Documents/ILTAC-memorandum.pdf>

Implications of Increasing Interim Targets for Academic Achievement

Within each content area interim proficiency targets have been established with the goal of 90% proficiency, overall and for each student group, by the year 2032. Each year the expected gain in proficiency is a constant value relative to the rate established in the baseline year. For example, for elementary schools the baseline ELA proficiency rate established in 2017 was 39.67. This means that a school starting with a proficiency rate of 39.67 must demonstrate, on average, an improvement of 3.36 percentage points each year to achieve 90% by 2032. Schools that start below the baseline need to demonstrate higher annual rates of improvement, on average, to meet interim targets and stay on track.

During the April Webinar the TAC suggested evaluating the potential implications of increasing interim proficiency targets on school achievement scores (for all students and each student group) in the short and long term. The concern was that these targets might become too rigorous to achieve (at the overall student and/or student group level) resulting in extremely low school index scores and/or high rates of schools identified as Underperforming (Tier 3). Such trends, if observed, could negatively impact stakeholder perceptions of the appropriateness and utility of the accountability system and the state's ability provide adequate support to identified schools.

To evaluate the implications of increasing proficiency targets the TAC reviewed analyses that showed the projected impact of various improvement rates over time on school level distributions of ELA and Math indicator scores. Specifically, the analyses modeled the implications of no improvement and rates of 1%, 2% and 3% annual improvement on the distribution of ELA and Math indicator scores in 5-year increments (i.e., in 2018, 2023, 2028 and 2032).

To evaluate the implications of increasing annual targets on student group performance a similar set of analyses were conducted for schools based on the interim targets established for the IEP subgroup. In this case the goal was to determine the rate and degree to which the increasing targets might influence student group school index scores in a manner that could significantly influence the number of schools identified due to low student group performance.

Summary of TAC Recommendations

At the overall school level the data analyses revealed that the interim targets appear to be reasonable and appropriate in the shorter term. Even with minimal annual improvements (e.g., 1% or 2% per year), the current distribution of achievement results will be relatively stable and will not have a significant impact on a school's overall school index score. This was due both to the attainability of the current targets and the overall weight of the indicator within the system. With more pronounced gains (e.g., 2% annual improvement or greater), the achievement distribution will have an increasingly favorable impact on overall scores. However, it is important to acknowledge that improvement rates will likely vary considerably by school and less is

known about patterns of progress for schools with different characteristics and in different contexts. Moreover, the pattern and magnitude of improvement that can reasonably be expected over many years is less certain (e.g., is it reasonable to expect a school to improve by 2 percentage points a year for 15 years?). For these reasons, the TAC recommends that ISBE continue to evaluate improvement rates over time to determine if the expected gains in the proficiency rate are reasonable. However, modifications to existing, short-term proficiency rate targets are not recommended at this time.

For certain student groups, the issue of achievement targets is quite different. In particular, the TAC examined achievement rates for students with IEPs, as this group is among the lowest performing in the state in ELA and mathematics. Based on the analyses the TAC reviewed, only pronounced, sustained improvement will impede a significant score decrease in future years. Because the distribution is very positively skewed in 2018 (i.e., lower scores are more frequently observed) sustained annual improvement of 3% or more is required to maintain the current score distribution. It is important to closely monitor the performance of this group in future years not only to better understand targets for ambitious but attainable improvement, but also to identify the conditions and context required to promote desired progress.

The TAC also urged further research on achievement and progress broken out by each disability category. Research shows that the variability within the broad category of “IEP” is likely much too vast to inform any meaningful insights about the performance of all students in the group.

Beyond high-stakes accountability, the TAC recommends developing a plan to clearly signal and communicate with schools that are not on track to meet their long-term improvement goals *before* it becomes a major issue. This could be accomplished through the use of a dashboard, stop light system, or other form of reporting that provides clear, intuitive information to stakeholders. If an early warning mechanism is not put in place schools that are off-track, but not doing poorly enough to be identified for comprehensive or targeted support, may not be able to catch up and achieve these goals even if improvement efforts are initiated in the future.

Finally, the TAC advocates exploring alternative approaches for defining appropriate progress goals for students with disabilities. For example, one TAC member suggested that ISBE should examine the implications and potential pros and cons of incorporating IEP goals as a component of or supplement to progress targets.

Implementing a Three-Year Composite

For small schools there are often few student groups having N-counts of 20 or greater. This means that they cannot be included in accountability calculations, limiting the information available to monitor changes in performance and evaluate how well students in these schools are being served. One solution considered by ISBE and used by other states is to generate a multi-year composite score which increases the number of student groups that can be represented in the accountability system for small schools. Multiple approaches were presented to the TAC for consideration and existing enrollment data was used to evaluate the number of schools that might be affected if a composite score approach were implemented.

Summary of TAC Recommendations

The TAC suggested that ISBE calculate and provide a 3-year composite to schools having student groups with an insufficient N-count, but do not include them in accountability calculations or use them to make decisions related to identification. In particular, the TAC expressed concern about inclusion of multi-year data in the system due to 1) lagged data, and 2) non-mutually exclusive group membership.

The TAC also recommended the development of a school-level report that illuminates and contextualizes equity issues by addressing such things as 1) the proportional representation of each student group within the school; 2) the discrepancy between the performance of each student group and overall school performance; and 3) how the discrepancy between total group and student group performance compares to that observed in other schools with similar characteristics.

Evaluating the Relationship between Growth and Proficiency

The TAC indicated that there was a need to better understand the relationship between growth and proficiency and how it manifests itself within the accountability system. In addition to summary statistics describing the performance of schools and student groups on growth and proficiency measures prior to and after scoring, the TAC reviewed correlations between current and previous year's proficiency rates with growth and the distribution of growth scores demonstrated by the highest performing schools (i.e., based on the overall school index). The intent of the latter set of analyses was to determine whether there are schools that appear to be performing well overall (i.e., classified as Tier 1 or 2) that demonstrate low rates of school growth.

Summary of TAC Recommendations

In general, the analyses show that growth is functioning in a manner consistent with that which the TAC has observed in other applications. There are no conspicuous anomalies that would suggest a near term change in the way growth is computed and incorporated in the accountability system. Even so, the TAC identified several priorities for ongoing research:

- Continue to analyze growth patterns for cohorts over multiple years to better understand if and how growth rates vary over time (e.g., are the growth rates observed in the first year sustainable?)
- To better understand patterns of growth for high and lower performing students, divide the distribution into quartiles and examine for each quartile: 1) the relationship between the growth and proficiency, and 2) the year-to-year stability of growth estimates.
- Produce growth estimates by student performance bands crossed with school performance bands. This will enable ISBE to better understand the nature of growth for students across the distribution in schools of varying levels of performance (e.g., do low performing students in a low performing school grow at the same rate as low performing students in a high performing school?). The table below depicts one approach to presenting these results:

	Students below proficiency	Students who are proficient	Students above proficiency
Lower performing schools	Median growth percentile	Median growth percentile	Median growth percentile
Moderately performing schools	Median growth percentile	Median growth percentile	Median growth percentile
High performing schools	Median growth percentile	Median growth percentile	Median growth percentile

Additional Considerations

Considerations related to the Inclusion of IEP students in State Accountability System

Data reviewed this spring suggested that schools are struggling to support the broad range of students classified as having IEPs. In 2018 over 80% of the elementary schools identified as Underperforming based on the performance of one or more sub-groups were identified due to the IEP student group. It is necessary to emphasize that the IEP classification contains a diverse set of students whose disabilities and needs vary widely both within and across disability categories (e.g., intellectual disability, hearing impairment, visual impairment, autism, and traumatic brain injury). Given this variability, the TAC indicated that additional, ongoing analysis was necessary to evaluate the utility of this classification within the accountability system. For most schools, evaluating students within this student group against a common set of performance targets may not be the best means to engender sustained improvement in student achievement because appropriate expectations and strategies for improvement may differ greatly based on a student’s disability status. The TAC recommended that ISBE consider how/if this student group might be disaggregated or

regrouped in ways that better inform schools on what they need to do to enhance student achievement for groups of students with different types of disabilities. One goal is not to inadvertently disadvantage schools serving students with particular types of disabilities. But the larger goal is to provide schools with more precise information on the rate at which specific groups of students with disabilities are achieving. Knowing this should help schools develop better targeted interventions and supports for students with disabilities and, ultimately, to get more students to standard. As addressed in a previous section, one option for ISBE to consider for accountability purposes is the extent to which students achieve their Individualized Education Plan (IEP) goals. To the extent possible, this would require the IEP goals for students in each disability group to be tied directly to the state standards and the goals for every student with disabilities to be set at high but attainable levels.

Supporting Schools: Focus on English Language Proficiency (ELP)

The TAC identified several instances where the distribution of ELP indicator scores suggested additional analysis and consideration was needed. This was especially the case in High School, where the distribution of performance on this indicator was significantly below that observed for other indicators. This was true generally, and specifically for EL students on an IEP. Specifically, the TAC suggested further research to understand the percentage of EL Students who are also students with disabilities and how those rates differ by grade. One goal of such a study would be to look for over-identification of EL students as having a disability. The TAC also suggested that ISBE explore chronic absenteeism rates for EL students with the goal of isolating related or intervening factors that could, potentially, be addressed or mitigated through targeted support and intervention. The TAC resolved to provide more specific guidance to inform the designs and analyses at future meetings.

More broadly, the TAC urged continued research on patterns of progress to proficiency for EL students, including how these patterns may differ by grade and length of time the student has been receiving EL services.

Recommendations Related to the Provision of Support for Identified Schools

At the April meeting, several TAC members indicated that there should be greater clarity around how the state's system of support aligns to and complements the information provided as part of the accountability system. The TAC indicated that there must be transparency around how schools are identified for support and how information provided in the accountability system can be used to inform local improvement efforts.

At the May meeting ISBE provided the TAC with an overview of the state's system of support for identified schools. Specifically, ISBE discussed the procedures and resources that are in place – both mandated and optional- to ensure districts and identified schools get the guidance and technical support they need to identify and implement appropriate pathways to improvement. In light of this discussion, the TAC provided ISBE with recommendations focused on helping all school districts and schools engage in thoughtful improvement planning and implementation.

To facilitate school improvement efforts, the TAC suggested that ISBE develop system-level resources that help school leaders analyze, evaluate and act upon data resulting from the accountability system. These resources should be designed for use by all schools, not just those identified for support, and include: the state's rationale for the inclusion of each indicator in the accountability system, guidance clarifying how indicator data should be interpreted and used, and strategies for improving performance on individual indicators. To ensure these resources meet the needs of districts and schools, ISBE should collect feedback – through surveys or interviews - about how data from the accountability system is currently used and what information or ways of structuring the data would be beneficial.

Given their intended role in the improvement process, the TAC also suggested that procedures be developed to evaluate and document the impact, quality and sustainability of support efforts provided by ISBE's Vendor and Peer Learning Partners on an annual basis⁸. If these efforts are the primary mechanism by which identified schools are intended to improve, ongoing monitoring and evaluation of their impact is necessary to ensure the support provided helps schools achieve their specified goals.

Finally, the TAC encouraged ISBE to think about ways to help schools identify data that can be gathered throughout the school year so that concerning patterns of performance can be identified and addressed prior to identification. Specifically, the state should support schools in collecting and evaluating useful, real-time data that can be used in a formative manner to support immediate change and improvement efforts rather than deferring action until after accountability data is provided.

⁸ A list of ISBE-approved Learning Partners is at the link: <https://www.isbe.net/Pages/IL-EMPOWERProfLearnPartner.aspx>

Appendix A – TAC Member Bios

Jeffrey Broom

Jeff Broom has served as the Director of School Quality Measurement and Research for Chicago Public School since February 2017. In that role, Jeff works with multiple stakeholder groups to draft, refine and maintain measures of school quality that are transparent, equitable and reflective of best practices in schools. He also leads the district's performance reporting efforts and coordinates both external research partnerships and internal cycles of continuous improvement. Prior to joining CPS in 2012, Jeff worked at Ounce of Prevention Fund in Chicago and received his Masters in Public Policy from the University of Chicago Harris School of Public Policy.

David Conley

David Conley is Professor Emeritus of Educational Policy and Leadership in the College of Education at the University of Oregon where directs the Center for Educational Policy Research. He is the founder and president of EdImagine, an educational strategy consulting company. Additionally, he founded and served for 12 years as CEO of the Educational Policy Improvement Center, EPIC. He recently completed an appointment as Senior Fellow for Deeper Learning under the sponsorship of the Hewlett Foundation.

Dr. Conley is a national thought leader in the areas of college and career readiness, student ownership of learning, systems of assessment, social/emotional learning, and new models of educational accountability. He has published multiple articles and policy briefs as well as three books in these areas. His most recent book, published in the summer of 2018 by Harvard Education Press, is entitled *The Promise and Practice of Next Generation Assessment*.

He has been a member of the Smarter Balanced Technical Advisory Committee since its inception in 2011. He is a founding board member of New Meridian, which now manages the PARCC assessments. Additionally, he chairs the New Meridian Steering Committee. Previously, he co-chaired the Validation Committee for the Common Core State Standards.

He has conducted major research studies for the SAT, Advanced Placement, International Baccalaureate, Cambridge Assessment International, and the National Assessment of Educational Progress. He has most recently studied “hard-to-measure” skills including learning strategies and metacognitive factors.

Before entering higher education in 1989, Dr. Conley spent 20 years in the public-school system in a variety of roles including teacher and co-director of two public alternative schools, a site and central-office administrator, and an executive in a state education agency. He is a first-generation college attendee who received his AA from Cabrillo College, his BA from the University of California, Berkeley, and his MA and PhD from the University of Colorado, Boulder.

Chris Domaleski

Chris Domaleski is Associate Director of the National Center for the Improvement of Educational Assessment. In that capacity he works with education leaders to provide technical guidance for the design and validation of innovative assessment and accountability systems. He serves on several state technical advisory committees; is the coordinator of the Council of Chief State School Officers (CCSSO) State Collaborative on Accountability Systems and Reporting; and

regularly provides technical support to the U.S. Department of Education. He also currently serves as an Associate Editor for the Journal of Educational Measurement, and regularly presents his research at national conferences.

Prior to joining the Center, Chris was Associate Superintendent for Assessment and Accountability at the Georgia Department of Education, where he was responsible for the development and administration of the state's K-12 testing program and accountability systems. He received a Ph.D. from Georgia State University in Educational Policy Studies, concentrating in Research, Measurement, and Statistics and he has taught numerous graduate courses in measurement and statistics at Georgia State University and the University of Georgia.

Laura Hamilton

Laura Hamilton is a senior behavioral scientist and distinguished chair in learning and assessment at the RAND Corporation. She directs the RAND Center for Social and Emotional Learning Research and co-directs the American Educator Panels, RAND's nationally representative survey panels of teachers and principals. She also serves as a faculty member at the Pardee RAND Graduate School and has served as an adjunct faculty member in the University of Pittsburgh's Learning Sciences and Policy program. Her research addresses topics related to social and emotional learning, educational assessment, accountability, school leadership, the implementation of curriculum and instructional reforms, and education technology. She currently leads RAND's work on the National Center to Improve Social and Emotional Learning and School Safety. Other recent projects include a study of a social and emotional learning intervention for elementary schools and afterschool programs, the development of a database of measures of students' inter- and intrapersonal competencies, and an evaluation of personalized learning interventions. She serves on a number of committees that address topics related to assessment and evaluation, including the National Academies of Sciences, Engineering, and Medicine Committee on Developing Indicators of Education Equity, the steering committee for the CASEL Assessment Work Group, and the technical advisory committees for several state assessment programs. She holds a Ph.D. in educational psychology and an M.S. in statistics from Stanford University.

Erika Landl

Erika Landl is a Senior Associate at The National Center for the Improvement of Educational Assessment. Erika chairs, organizes and participates in multiple state Technical Advisory Committees and frequently works with state Departments of Education to design and facilitate stakeholder meetings in support of state policy initiatives. Since joining the Center in July 2012, Erika has worked with several states to articulate coherent, defensible theories of action aligned to state goals and has developed user-friendly resources that support the evaluation and refinement of educator evaluation and school accountability systems. She has consulted on the design of innovative assessments, including those for Career Technical Education; generated papers summarizing current practices related to the evaluation of educators in non-tested grades and subjects, supported individual states and consortia in drafting detailed Requests for Proposal (RFPs) and developed tools and a process to support the evaluation of large scale summative assessments. To meet the needs of her clients and support the Center's mission, Erika frequently generates white papers, presentations, and training sessions for local and national audiences.

Erika previously served as a Senior Research Scientist at Pearson, where she was lead psychometrician for a variety of state and national assessment programs. During her 13 years at Pearson, she was responsible for the planning, management and coordination of the full array of psychometric activities necessary to sustain a large scale assessment program, including: test design and development, scaling and equating, item and test analysis, parameter estimation, standard setting, the development of reliability and validity research, report design, and the creation of technical documentation. Erika received a Ph.D. in Educational Measurement and Statistics from the University of Iowa.

James Pellegrino

James W. Pellegrino is Liberal Arts and Sciences Distinguished Professor and Distinguished Professor of Education at the University of Illinois at Chicago. He also serves as Co-director of UIC's interdisciplinary Learning Sciences Research Institute. His research and development interests focus on children's and adult's thinking and learning and the implications of cognitive research and theory for assessment and instructional practice. He has published over 300 books, chapters and articles in the areas of cognition, instruction and assessment. His research has been funded by the National Science Foundation, the Institute of Education Sciences, and private foundations. He has served as head of several National Academy of Sciences study committees, including chair of the Study Committee for the Evaluation of the National and State Assessments of Educational Progress, co-chair of the Committee on Learning Research and Educational Practice, and co-chair of the Committee on the Foundations of Assessment which issued the report *Knowing What Students Know: The Science and Design of Educational Assessment*. Most recently he served as a member of the Committee on Science Learning: Games, Simulations and Education, as a member of the Committee on a Conceptual Framework for New Science Education Standards, as chair of the Committee on Defining Deeper Learning and 21st Century Skills, and co-chair of the Committee on Developing Assessments of Science Proficiency in K-12. He is a past member of the Board on Testing and Assessment of the National Research Council, a lifetime National Associate of the National Academy of Sciences, a lifetime member of the National Academy of Education and the American Academy of Arts and Sciences. He has served on the Technical Advisory Committees (TAC) of several states and organizations such as the College Board and the National Center on Education and the Economy, as well as the TACs of the SBAC, PARCC, DLM, and NCSC consortia of states funded under the USDOE Race to the Top assessment initiative.

Mike Russell

Dr. Michael Russell, Professor, Educational Research, Measurement and Evaluation, Boston College, received his Ph.D. from Boston College. His scholarship focuses on validity theory, history of educational measurement, innovative uses of computer-based technologies, applications of Universal Design to enhance educational testing and assessment and large-scale assessment and test design. He was the founder and Chief Editor of the Journal of Technology, Learning and Assessment and a co-developer of the Accessible Portable Item Protocol (APIP) standards. He has authored more than 50 articles and four books on educational measurement, educational technology, and computer-based testing. He provided technical support for the Smarter Balanced, PARCC, and NCSC multi-state assessment development projects and currently serves as a technical advisor to several state and national assessment programs.

Diana Zaleski

Diana Zaleski is the Instructional Resource and Professional Development Director for the Illinois Education Association and an instructor in the Department of Psychology at the University of Illinois Springfield. Dr. Zaleski specializes in adult learning, educational accountability, assessment, data analysis, program evaluation, and policy. She holds a Ph.D. in Educational Psychology, a M.S. in Educational Research and Evaluation, a M.S.Ed. in Educational Psychology, and a Certificate of Graduate Study in Advanced Quantitative Methodology in Education from Northern Illinois University.

DRAFT

Appendix B – Illinois Science Assessment (ISA) Recommendations

Memorandum

To: The Illinois State Board of Education (ISBE)

From: Illinois Assessment and Accountability Technical Advisory Committee (TAC)

Re: Illinois Science Assessment (ISA) Recommendations

Date: June 10, 2019

Introduction

The Illinois Technical Advisory Committee (TAC) convened on multiple occasions in the spring of 2019 to consider recommendations to Illinois State Board of Education (ISBE) related to the state’s assessment and accountability systems¹. This memorandum has been prepared to address the TAC’s advice related to the redesign and development of the Illinois Science Assessment (ISA).

ISBE is planning to revise the ISA in order to more fully represent the breadth and depth of the state’s content standards which are based on the Next Generation Science Standards (NGSS). This work is particularly critical given findings from the United States Department of Education (ED) peer review, which indicated the current ISA is not in compliance with federal requirements in the Every Student Succeeds Act (ESSA). Consequently, the ISBE convened the Illinois Science Assessment Steering Committee, which recommended substantial revision of the ISA and produced a new high-level blueprint.²

The current (hereafter: legacy) version of the ISA was operationally administered in the spring of 2019, following a multi-year development process. (In a separate memorandum, we address the TAC’s recommendations for inclusion of the legacy ISA in the state accountability system.) Moving forward, ISBE will need to determine the process and timeline for critical redesign and development activities including writing and/or acquiring new items, reviewing new content, developing item and form specifications, piloting and field-testing items and forms, and setting

¹ A list of TAC members and the agenda and materials for each meeting are available at: <https://www.isbe.net/Pages/AccountabilityTechnicalAdvisoryCommittee.aspx>

² The steering committee’s report is available at: <https://www.isbe.net/Documents/Illinois-Science-Assess-Blueprint.pdf>

new performance standards. The remainder of this memorandum outlines the TAC’s recommendations to guide that process.

TAC Recommendations

The TAC considered several models for redesign and development of the new ISA, evaluating the strengths and limitations of various approaches. This process resulted in a set of guidelines to inform the development process. ***These guidelines are intended to reflect the TAC’s overarching emphasis, which is to safeguard an approach that is sufficient to produce a high quality, technically defensible, and operationally feasible assessment for the students and stakeholders in Illinois.*** The TAC’s guidelines follow:

- The TAC strongly recommends at least two full years of development and field testing prior to operational administration. Therefore, the first operational implementation of the new ISA should not occur prior to spring 2022.

Well-established professional practices in educational measurement require multiple years to design, develop, field-test, and implement a new or substantially revised assessment, as is the case with the ISA. Taking short-cuts greatly elevates the risk of producing an assessment that poorly reflects the target content, is technically flawed, and/or is likely to experience failures during administration, scoring, or reporting.

While multi-year development is necessary for any large-scale, educational assessment, it is particularly important for an assessment based on the NGSS due to the multidimensional nature of the standards. For example, the landmark National Research Council (2014) report on assessing the NGSS cautions, “This new vision of science learning presents considerable challenges.... Existing science assessments have not been designed to capture three-dimensional science learning and developing assessments that can do so requires new approaches.”³

- The TAC recommends careful monitoring and evaluation throughout the development process to determine if the timeline for administration should be adjusted. Deploying a new operational test in 2022 remains a very aggressive, ‘best-case,’ timeline which is only feasible if all development activities proceed without delays or complications.
- The development process should allow for the review of newly developed or acquired content by expert science educators before and after field testing. In addition, items and forms that reflect the blueprint and specifications for the ISA should be piloted prior to operational testing (i.e., before the scores ‘count’).
- Scoring, scaling, and performance expectations should be established following the first operational test, reflecting the performance of a representative group of motivated examinees under standardized conditions.

³ National Research Council. 2014. *Developing Assessments for the Next Generation Science Standards*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/18409>.

- During the development, pilot, and field test period, the TAC advises ISBE to continue to administer a core test that reflects the legacy ISA and maintain the legacy performance expectations. Among other benefits, this will help ensure the field has more time to develop and implement the necessary curriculum and instructional practices to promote opportunity to learn.
- The TAC recommends exploring multi-stage or fully item-adaptive models for the new NGSS. This will require additional time and resources to develop and test the appropriate adaptive algorithm and computer platform⁴.

The TAC would be pleased to provide any additional information regarding these recommendations and the supporting rationale.

⁴ A fixed-form approach may be appropriate in the near-term to allow more time to develop and test adaptive models.

Appendix C – Accountability Recommendations for 2019

Memorandum

To: The Illinois State Board of Education (ISBE)

From: Illinois Assessment and Accountability Technical Advisory Committee (TAC)

Re: Accountability Recommendations for 2019

Date: June 10, 2019

Introduction

In 2018 ISBE worked with the National Center for Assessment (Center for Assessment) to assemble and facilitate an independent, national technical advisory committee (TAC). The TAC was commissioned to work with the existing state plan developed in response to the Every Student Succeeds Act (ESSA), understanding the policy priorities reflected therein, and provide recommendations aligned to IL's goals and values.¹ A common theme in the TAC's final report was the need for continuous evaluation of the accountability system's design and business rules, especially as new indicators are incorporated in the system.

In spring of 2019 the TAC was reconvened. Over a period of 3 months the TAC provided recommendations focused on supporting ongoing evaluation and refinement of the state's assessment and accountability system, including IL's transition to a new assessment in Science. While a comprehensive summary of the TAC's discussions and recommendations will be provided to ISBE on a subsequent date, this memo calls out two timely recommendations that will impact implementation of the accountability system in 2019. The first recommendation outlines procedures for scoring the school climate indicator and ensuring all schools have appropriate participation rate information. The second describes the TAC's recommendations related to how and when the science indicator should be included in the accountability system.

Climate Survey Inclusion and Scoring

For any given school the school climate indicator is defined as the percentage of eligible students within a school that participate in the school climate survey. In 2017-2018 schools were not required to administer a school climate survey, so this indicator was not scored (i.e., all schools received 5 points). For 2018-2019 all schools were required to administer an approved climate

¹ A list of TAC members and the agenda and materials for each meeting are available at: <https://www.isbe.net/Pages/AccountabilityTechnicalAdvisoryCommittee.aspx>

survey, so school participation rates are available. The TAC was asked to provide guidance for scoring this indicator as well as how to deal with a small percentage of schools for which student participation was not linked to demographic data, preventing disaggregation by student group.

Scoring of the School Climate Indicator

In 2018 the TAC provided an initial recommendation for scoring school participation on the school climate survey. At that time the TAC indicated that this recommendation should be revisited once participation data from the 2017-2018 school year were available. Although the school climate indicator was not scored in 2018, for schools that administered a survey participation data is available. The TAC reviewed this data with the goal of developing a scoring procedure that would incentivize schools and reflect the state's expectation that all students participate in the school climate survey. The TAC's final recommendation for scoring the school climate indicator is as follows:

- Award 95-100% participation a score of 100.
- Award 50-95% participation a score based on linear interpolation from 0 to 100, where 50=0 and 95=100 and scores for all increments in between are assigned values in equal intervals.
- Below 50% participation receives a score of 0.

This recommendation reflects the ISBE's goal of encouraging schools to obtain a response rate of 95% or greater. Conversely, response rates below 50% were regarded as particularly problematic and severely impede a school's ability to draw useful inferences from the data.

Inclusion of all Schools

For the small percentage of schools that did not capture survey participation data at the student level, the TAC suggested that ISBE send each school a roster. The roster should be used by the school to indicate which students participated in the survey and then submitted back to the state. The roster will indicate the number of students who participated in the climate survey, as reported by the vendor, so that a school can verify that its count is accurate. Once provided, ISBE can merge in the demographic data necessary to calculate a school climate score for each eligible student group within the school (i.e., having more than 20 students).

Scoring of the Science Achievement Indicator

IL's consolidated ESSA accountability plan indicates that performance on the Illinois Science Assessment (ISA) will be included in the state's accountability system beginning in 2018-2019. Due to the planned transition from the current version of the ISA to a test aligned to the new ISA blueprints in subsequent years, ISBE requested the TAC's opinion related to both the procedure and timeline for inclusion of the science indicator within the state's accountability system.

The TAC reviewed the process used to calculate and score the ELA and mathematics indicators with the goal of determining whether a similar process could be applied in science. This process

awards 100 points if the annual achievement target is met or proportional points if the target is not obtained. These procedures were modeled using data from the 2016-2018 ISA administration for all students as well as the Low Income and IEP student groups. The TAC used these analyses to help inform their recommendation about the likely impact of adding science.

To minimize confusion and maintain as much consistency as possible, the TAC recommended that the procedure used to score the ELA and math indicators should be applied to the science indicator when it enters the system. In addition, any analyses conducted to evaluate the feasibility of the interim targets over time should be conducted for science as well as ELA and math.

In terms of the timeline for inclusion, the TAC indicated that this was primarily a policy decision, but agreed it is logical and consistent to include the indicator when operational results are available, which would begin in 2018-2019 (i.e., results communicated in fall 2019). If the characteristics of the assessment transition in the future, which is likely, the TAC recommends continued review and scrutiny of the scoring procedure.