TECHNICAL ADVISORY COMMITTEES: TECHNICAL GUIDANCE IN CHALLENGING TIMES

Juan D'Brot
National Center for the Improvement of Educational Assessment

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In light of the recent guidance offered by the U.S. Department of Education, states across the country are working diligently to restart accountability systems and understand the implications of how assessment programs have and continue to be affected by the COVID-19 pandemic. Since the spring of 2020, states and districts have been faced with numerous issues affecting their assessment and accountability systems that include test cancellations, test interruptions, decreased participation rates, challenges to scaling and equating, and risks to field tests and analyses. Technical Advisory Committees (TACs) have been advising states since before the pandemic and often ground their advice in the Standards for Educational and Psychological Testing (2014), U.S. Department of Education peer review requirements (2018), Operational Best Practices for Large-Scale Statewide Assessments (2013), and literature from research, evaluation, measurement, and statistics. However, getting the most out of a TAC, especially under today's conditions, requires the right people, the appropriate amount of preparation, and promoting engagement across TAC members.

In this brief, I argue the value a TAC has in assessment and accountability programs and raise the following points related to how TACs should function:

- **Form the TAC that makes the most sense for you:** You have to work to get the most out of your TAC, which includes finding the right TAC composition. The issues you intend to address, and the breadth of your program(s) will dictate the perspectives and voices that need to be represented.

- **Determine the structure of your TAC:** How do you want your TAC to operate and who should be the primary point of contact for logistics? Do you need a facilitator? Do you need a chair? Who manages the TAC? How will the TAC be compensated? These questions will all need to be addressed far enough in advance to support TAC meetings for a typical fiscal year.

- **Plan, plan again, and follow through:** Ensure you have a plan to approach your TAC meetings. What is the process for documenting discussion, decisions, recommendations, and next steps? What are the timelines and meetings to prepare for TAC meetings? How are you assigning tasks after a TAC meeting? A successful TAC meeting begins with sufficient advanced planning and concludes with taking concrete action after a meeting.

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- **Understand how the TAC fits into the assessment ecosystem:** The assessment ecosystem is a large one that begins with standards development and continues well into use and interpretation. It is important to keep the TAC focused on the recommendations they are best equipped to address. Your TAC won't know what you don't tell them, which requires that you determine which local issues, climate, and contextual background the TAC must be aware of to provide the support you need. A strong TAC can a powerful ally to your program(s), however they are not your only feedback group. Consider how TAC recommendations could and should be balanced against other stakeholder groups to inform programs most appropriately.

In the rest of this brief, I discuss each of these four ideas in greater detail and invite others to criticize, extend, or supplement my thinking.

FORM THE TAC THAT MAKES THE MOST SENSE FOR YOU

At the Center, we regularly discuss "purposes and uses." While valuable, I personally favor a tighter focus on "uses," often because it gets directly to the question of how you intend to use the TAC to support your assessment program. A consideration of "uses" forces more clarity about design, development, and implementation. This section presents several ideas around the formulation of a TAC aligned to your needs.

Focus of the TAC
The formation of a good technical advisory committee begins with a consideration of the scope of work the TAC should be ready to tackle. TACs are regularly convened to provide guidance on assessment programs. That guidance must be informed by specific technical expertise in a variety of psychometric areas, which are described in greater detail in the next section. It is unlikely that any one individual will be expert in all areas, which is why states typically convene a TAC (i.e., a committee) rather than hiring a single technical consultant.

Once the required technical areas of expertise are identified, states or districts will need to define the TAC's involvement across the scope of the assessment program itself. Will the TAC be advising on the state standardized assessments used for accountability (i.e., math, ELA, and science assessments required in the *Every Student Succeeds Act*) or will a larger assessment system be included? If the former, TAC membership will still require expertise in English language proficiency and alternate assessments.

If the state or district requires a more focused TAC that is only targeting something like end-of-course tests, then the membership can be adjusted accordingly. However, many states are starting to include discussions of balanced assessment systems (see Marion, et al., 2019). TACs with that wide of a focus may be advising states or districts on topics including assessment systems, interim assessments, district assessment use, consequences, or applications of assessment results. While these topics should be informed by psychometric expertise, TAC members may also need to possess experience in areas like program evaluation, curriculum and instruction, classroom assessment, and implementation science to best advise states or districts.

In addition to technical areas and the scope of the assessment system, states and districts will need to determine whether their accountability systems require a separate, dedicated technical advisory committee. Accountability systems are complex systems in their own right and are informed in large

part by large-scale assessment results. The way in which an assessment system produces scores will dictate how results like status and growth are factored into accountability. However, accountability systems have their own sets of technical requirements, challenges, and concerns where states and districts may benefit from technical advice (see D'Brot, 2021).

Will the assessment TAC include accountability expertise, or should a separate TAC be convened to focus specifically on issues that revolve around an accountability system? There is an argument to be made for including accountability expertise on your assessment TAC since so many accountability issues may be influenced by assessment ones. Additionally, there is far less guidance on the technical quality of accountability systems (although the body of work continues to grow). Many of the structures and processes used in large-scale assessment design, development, and implementation can be applied to accountability systems, suggesting that a combined TAC may be both efficient and effective for states and districts.

Membership/Organization of the TAC
Once the focus of the TAC is clarified, we can begin considering the expertise needed for the TAC. TAC membership should be driven by the categories of expertise needed rather than specific people (see Marion, 2015). Once you've identified categories of expertise, you can then begin to generate a potential list of members by category. It may even be advantageous to identify a core group of consistent TAC members who attend all meetings and separately include supplemental TAC members who drop in for a meeting or two with specific expertise (e.g., improvement science, curriculum design, information technology). The table below, which is separated into primary and secondary areas of expertise, provides a potential starting point for readers to consider when populating their TAC:

TABLE 1. POTENTIAL TAC EXPERTISE AREAS

Expertise Area	Description
Primary Areas of Expertise	
Psychometrics	This will include expertise in areas that can help maintain the technical quality of an assessment. Members with psychometric expertise will need to be at least as credible as the test vendor in areas that include (but are not limited to) field testing, classical item analysis, scaling, equating, and scoring.
Assessment design and development	This area will be related to psychometrics and test development but will include a tighter focus on how the standards are represented on the assessment and on concepts like alignment, item development, form construction, standard setting, and the representation of constructs on the assessment.
Special populations	This will require experts who can support the development and evaluation of assessments focused on students with disabilities and English learners. Members should also have experience with interrogating assessment design focused on the impact of racial and ethnic groups and any supporting technical analyses (e.g., differential item functioning, fit statistics) or supports (e.g., assessment accommodations, accessibility guidelines, universal tools) that are needed.

Growth modeling	While related to accountability design and use, growth models may exist as a standalone area of support given their role in reporting student progress to the public. This will require someone who is an expert in a specific growth model (if one is already in place) or in growth modeling (in general) to support policy goals and avoid technical pitfalls.
Assessment administration, test security, and practicality	This area is intended to address the nuts and bolts of assessment administration. While a consideration of test security would be helpful, members with practical experience administering or managing the administration of assessments would be the primary focus.
Secondary Areas of Expertise	
Reporting and communications*	Assessment reports are the component of an assessment program that are the primary point of interaction for most stakeholders. While related to scoring, a member with experience in reporting, creating visualizations, or messaging technical topics can be helpful.
Accountability*	Accountability system design, development, and implementation will decidedly be a consequential consideration of a state's assessment. The potential inclusion of this expertise will depend on the scope of the advice expected from the TAC.
Program evaluation or statistical methods*	This area would likely focus on how assessment results are used or how school improvement efforts (related to accountability) may affect scores from an assessment system. The broader the TAC's focus, the more likely this expertise would be valuable.
Program specific area*	A state or district's program may require temporary or ongoing expertise. For example, a new science assessment focused on the Next Generation Science Standards (NGSS) may benefit from an expert in the standards, as well as science assessment. Another specific example may be the need to have expertise in computer adaptive test design if it is relevant to the program.
Classroom assessment or curriculum and instruction*	This area of expertise would be used to supplement large-scale technical knowledge and could help counterbalance assumptions about the value of large-scale assessment and accountability with a "ground-level" perspective more connected to students and educators.
Post-secondary readiness or college-placement*	Large-scale assessment and accountability programs are typically designed to determine whether students are being supported for post-secondary readiness. This expertise can help evaluate a program's ability to support claims monitoring student progress toward post-secondary success.

*Including members with these areas of expertise may make a TAC too large for practical purposes. However, these topics could be addressed by members with cross-expertise or members could be included on an ad-hoc basis.

Please note that a TAC does not need to have every one of these categories to be considered effective. As noted in the table above, some of the secondary areas of expertise can be covered by supplemental advisors, advisors with cross-expertise, or ad-hoc attendees to a particular meeting. The expertise areas presented in the table are instead intended to represent a wide set of perspectives that may be beneficial to include if appropriate for the state or district.

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A Note on Representation
To be a good TAC member requires a unique skillset based on expertise and experience in technical, practical, policy, and often political issues. At the Center for Assessment, we recognize that many state and district programs "go to the well" for tried-and-true TAC members. But relying on the same experts can stifle growth and progress in assessment design, development, and implementation. Going beyond our traditional networks means we may need to rely on untested talent, but this is something we must push ourselves to do. Diversity in perspective, be that of race, color, creed, or orientation, will only make stewardship of a program stronger. A wider view of the world will help empower voices that may be marginalized, or less regularly considered and large-scale assessment and accountability should be an effort focused on identifying disparate outcomes to aggressively address inequitable opportunities systemically and systematically. To that end, it may also be valuable to include diverse perspectives about assessment and assessment use. Many TAC members focus on large-scale and standardized assessment and including viewpoints that prioritize other types of assessment (e.g., interim, classroom, formative assessment practices) can be beneficial to a state or district.

DETERMINE THE STRUCTURE OF YOUR TAC

Good TACs will have a tremendous amount of insight to offer. Therefore, it is critical all member voices are heard and that those voices complement and supplement the ones from assessment providers, other researchers, and state or district staff. While the representation and diversity of viewpoints was discussed in the previous section, this section will focus on the structure of a TAC, including its positioning, processes, and facilitation.

Positioning and Processes of the TAC
Knowing what the TAC will address and who will be a part of the TAC are key first steps. An important next step is to determine how the TAC is positioned in the assessment ecosystem and what processes and procedures govern the TAC. TACs may be positioned publicly or privately. That is, will you establish TAC meetings as open meetings or private ones? This determination will be dependent on the local policies, rules, and regulations governing meetings, which may depend on whether the TAC is making formalized decisions, recommendations, or simply providing advice. A state or district may need to confer with their legal counsel to ensure that TAC meetings are conducted in accordance with meeting notice, recording, or documentation requirements.

Beyond how a TAC is positioned, the state or district will need to determine the processes that govern a TAC. Many TACs are inherited as assessment program managers (e.g., state or district assessment coordinators, directors, or other staff) turnover so their operating processes and procedures are handed from one person to the next, making it important to document how the TAC is governed. TAC governance could range from a very formalized voting and approval process to a very informal structure where the TAC advises. Regardless of the governance structure, TAC members will benefit from clarity on the TAC's structure. Other members from the Center have established TAC Charters, which are intended to define the scope, membership, and expectations for the TAC, as well as terms and compensation expectations. For an example of such a charter, please see the Project Lead the Way TAC Charter (Lorié, 2021).

TACs will also support states and districts across changes in vendors or assessment programs. This may introduce complications if vendors are responsible for the logistical management of the TAC. While I address this more directly in the next subsection, a state or district will need to manage

these transitions carefully. Any changes to the vendor or assessment program may provide a state or district the opportunity to make changes to the TAC's governance. If a state or district is simply continuing with past practice, it may be worth examining how the TAC is governed and determining whether a change would result in more effective TAC management.

TAC Facilitation
Aside from the governance structure of the TAC, facilitation will determine how the state or district can maximize the benefit from their TAC. It is wise to differentiate between the coordination and logistical management of the TAC. Often, a skilled logistician and a skilled facilitator may not be the same individual. I will start with coordination, as it is typically more nuanced than the logistical planning of the TAC. I offer three potential structures that a state or district may employ to structure their TAC in the table below.

TABLE 2. POTENTIAL TAC STRUCTURE

TAC Structure	Considerations	Key Risk Points
State or District Facilitated	States and districts staff will need a high amount of internal and technical capacity to facilitate their own TACs. In addition to capacity, they will also need the time and space to devote to sufficiently facilitate planning a TAC agenda, collecting materials, and interacting with the vendor while also listening to the TAC's advice.	Aside from time and expertise, a state or district staff member is reliant on the vendor to provide the actual assessment product. The relationship with the vendor will need to be managed carefully to ensure sufficient focus is placed on the health of the program and on being critical of the program through strong inquiry focused on continuous improvement.
TAC Facilitated	TAC members will need to be willing to take on extra responsibilities to ensure the state or district feels prepared to engage with the larger TAC and vendor. This may require regular meetings with the state or district.	Unless very capable and having sufficient time to spare, it may be challenging for a TAC member to both facilitate and contribute as deeply to discussions during the TAC meeting. Further, it may be difficult to have the TAC member have sufficient time to meet with the state or district to establish an agenda and prepare for a meeting.
Third-Party Facilitated	The state will need to identify an external facilitator who has the expertise, capacity, and experience to both facilitate technical meetings and establish procedures, processes, and documentation to plan, execute, and follow up meetings.	This can be the costliest option for a state or district but can create a clear delineation of responsibility among the state or district, TAC, and vendor. This may also require that the state or district integrate the third-party more deeply to ensure they are able to help identify key topics or emergent issues.

Please note that I did not include a vendor facilitated TAC as an option. While I have seen this used in the past, it is far less effective and could result in problems, both optically and operationally. Having the vendor facilitate the TAC can makes it difficult to obtain an objective perspective that is

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also able to factor in contextual policy requirements, practical constraints, issues that exist outside of the program (of which there are many), and solutions that may not be the most efficient or cost-effective.

As for logistical planning, states and districts may leverage an assessment vendor to help manage meeting planning, location, and payment of TAC members, so long as the role and responsibilities associated with the logistics are clearly defined. This structure can also help the state or vendor instantiate additional meetings or reviews in case there are unexpected or particularly challenging issues that emerge. One challenge to keep in mind is that this will require transitions across assessment providers when a contract concludes. TACs are almost always involved when states are transitioning across contracts and the state or district may prefer to control any payment or logistics through their own budgets and oversight. The best choice for logistical support will balance the investment of effort with the most appropriate and ethical contracting possible.

PLAN, PLAN AGAIN, AND FOLLOW THROUGH

TAC meetings can be challenging to plan and facilitate because they typically include very knowledgeable, engaged, and interested attendees who will want to address topics in detail. This section provides guidance around the topics of planning, preparing and sharing materials, facilitating and follow-up to the meeting, and determining the schedule and structure of the meetings.

Planning

Planning the agenda for a TAC meeting means that the state or district will need to be very prepared with the appropriate documentation, materials, or presentations in advance of the meeting and sufficiently prepared to address the questions that will come up throughout the meeting. Identifying the appropriate questions for a TAC agenda also means that the appropriate stakeholders will need to be consulted. These stakeholders will include the contractor or vendor, the assessment team, and others who may be affected by any assessment program decisions (e.g., other offices, schools, federal or state government officials, or local policymakers).

It may also be worth delineating the agenda between near-, mid-, and long-term issues. Many TACs deal with immediate issues that are barriers to best practice or that affect the current program year (or month). However, dedicating time and topics on the agenda that are intended to address the next program year, or even the next program, can allow the TAC to provide advice with enough time for the state/district and contractor to enact recommendations.

Preparing and Sharing Materials

Once the agenda is developed, planning can shift to preparing and sharing materials. TAC meeting preparation should begin at least one to two months in advance of each meeting. This should enable the state or district to ensure materials can be developed or connected to the agenda, and that all other parties (e.g., vendors, state/district partners, stakeholder representatives) are prepared and able to participate accordingly.

Furthermore, advance planning will help ensure that you give TAC members enough time to review any materials in advance of the meeting. While most materials for agenda topics may only require a few days or a week's notice, larger reviews (e.g., technical reports, peer review submissions) may warrant two to three weeks' notice to allow for a meaningful review. As part of preparing and

sharing materials, the state or district will want to think carefully about what to share with the TAC, what to share with contractors, and what may be restricted information that may require a confidentiality agreement (e.g., assessment items, RFP language, contract information). Once decided, the state/district can share the materials to make the best use of the TAC's time and keep them focused on key questions.

Facilitating the Meeting

Throughout the TAC meeting, the facilitator should be actively taking notes, soliciting feedback from TAC members who may be a little more reticent, and identifying action items for the relevant attendees. By tracking progress using meeting minutes, the facilitator and other attendees can monitor the progress of recurring agenda topics over the course of several meetings. In order to capture action items accurately, facilitators may wish to review items with meeting attendees. One useful strategy may be to pause at the end of each agenda item to review a summary of the discussion or key points to ensure relevant comments and recommendations are accurately identified. If the facilitator, state, or district would prefer for the meeting to maintain a smooth cadence or limit the number of interruptions, it may be more appropriate to review any of summaries or action items at the conclusion of each day throughout the meeting.

Post-Meeting Efforts

Following the meeting, the facilitator should compile the meeting minutes into a workable summary that can be shared with the TAC and other meeting attendees. This will allow meeting attendees to review the meeting minutes for accuracy and ensure that key action items are reviewed by the relevant parties. We cannot assume that simply reviewing the minutes will ensure that responsible parties understand that there are certain action items they must address. Critically, the facilitator should ensure that any action items turn into a plan of action so that "to dos" get done. The facilitator may need to be proactive in supporting the state/district, vendor, or other parties in understanding timelines and deliverables for each task. If action items are not resolved between TAC meetings, it is likely that the same concern will emerge again. The facilitator may also need to work with the state or district to follow-up on certain action items to determine when deliverables may be available to bring back to the TAC, vendors, contractors, or other stakeholders. This can be a good way to maintain momentum on ongoing agenda topics or to provide updates to the TAC when they are reconvened.

Schedule and Structure of the Meetings

TAC planning, preparation, sharing of materials, facilitation, and follow-up require thoughtful scheduling and structuring of TAC meetings. TAC members are typically very in-demand and require advance planning to ensure availability for a meeting. Typically, meetings will need to be scheduled at least a year in advance because of the demands placed on schedules.

The schedule of TAC meetings will vary by based on the maturity of a program or due to local circumstances. Under typical circumstances, most programs would benefit from two larger TAC meetings a year that may span a day and a half. While TAC meetings have traditionally been in-person, pandemic-related disruptions forced TAC meetings to be convened virtually. The transition to virtual meetings has revealed some benefits to remote, as well as in-person meetings with the TAC. The return of in-person travel makes it possible to host substantive in-person meetings and potentially host shorter (e.g., 2-3 hour) virtual meetings in between the larger TAC meetings. This would yield an opportunity for at least four interactions with the TAC per year, enabling them to have a relatively strong connection with a program.

This timing is, of course, a general guideline, but would likely vary depending on the stage of an assessment cycle. For example, there may be significant disruptions or challenges that a state or district might face due to a lawsuit, a denial-of-service attack, a pandemic, or natural disaster. This may warrant emergency TAC meetings, which can likely be supported most efficiently through virtual meetings. There may also be the need to prepare for a major change in the assessment program such as a shift to adaptive testing, the inclusion of remote administration, expanding the complexity of the program, or even transitioning from one assessment contractor to the next. This might require the state, district, or facilitator to account for future changes in the schedule and increase the frequency of in-person TAC meetings to accommodate the desired amount of guidance from the TAC.

UNDERSTAND HOW THE TAC FITS INTO THE ASSESSMENT ECOSYSTEM

The assessment ecosystem includes the design, development, implementation, and use of assessment results. This means that we must consider issues beyond the assessment itself to ensure the right questions are being asked and sufficient context is deliberated. I argue that the assessment ecosystem begins with standards development and continues well into assessment use and interpretation. Thus, the types of questions that may be addressed from a technical standpoint can be quite varied and difficult to manage. This section addresses the ideas of transparency of requests made to the TAC and leveraging TAC recommendations in light of other feedback groups.

Transparency of Requests made to the TAC
The state, district, or contractor must make it clear to the TAC why the question is being asked and what context is important to consider as it will have a direct impact on the outcome of the TAC meeting and the quality of their advice.

TAC members will have the ability to apply technical insight and prior experience to novel contexts raised by a state or district. However, TACs can only address issues of which they are aware. In other words, your TAC won't know what you don't tell them. There may be sensitive issues or topics that a state or districts may face that requires external advice. TACs can be strong support structures here because they likely have been a part of sensitive issues in the past. But states and districts need to remember that the TAC will not have the same understanding as the state/district. This will require states and districts to frame issues clearly and interpret advice accordingly.

It has been my experience as a state employee, a vendor presenting to TACs, TAC member, and TAC facilitator that a TAC generally has the best interest of the state or district in mind. They will weigh all possible perspectives to which they are attuned. This is where the ideas of both representation (to ensure they have the experience or capacity to take a certain perspective) and planning (to ensure they are sufficiently prepared to understand the context) are so important.

Leveraging TAC Advice
TACs aren't the only support group that assessment and accountability programs can leverage. TACs are perhaps the most technically informed of support groups, but the larger set of stakeholder groups in the assessment ecosystem is important to consider as well. For example, states and districts can benefit from something like an Assessment and Accountability Advisory Group, which may be focused on the implementation of policy or changes to a program. Communities of practitioners can also be valuable resources as they can speak to the practicality of or reactions to program changes. Thinking about earlier parts of the ecosystem, Standards Adoption Committees

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or Standards Implementation Committees may provide valuable insight into the way in which academic standards are designed and deployed across a state or district. On the latter end of the ecosystem, local parent and/or student feedback groups can help us understand how changes to programs and our communication impact those who are the intended recipients.

Earlier, I mentioned that TACs may not have a complete understanding of the context in a state or district. This same constraint can be extended to other feedback or advisory groups as well. States and districts should consider the strength of each group's feedback and determine how the various guidance can be combined coherently.

CONCLUDING THOUGHTS

Selecting, managing, and facilitating TACs can be a potentially intimidating endeavor, but ultimately one that will be well worth the challenge if handled thoughtfully. The problems that TACs can best support are often technical but must also be couched in the reality of policy, practical, and political constraints. Integrating any advice you might receive from your own TAC, along with the recommendations of other stakeholder groups, can position states or districts well when tackling complex problems. While there are likely many details I have left out that might be helpful when thinking about TACs, I hope that this information can make the process a little clearer and a bit more accessible.

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