IES Institute of Education Sciences

Best Practices and Challenges for Embedding Equity in Education Research

Technical Working Group Summary | November 30 - December 1, 2022

U.S. DEPARTMENT OF EDUCATION

A Product of the National Center for Education Research

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Introduction

In June 2022, the Institute of Education Sciences (IES) introduced a new equity standard and associated recommendations to its [Standards for Excellence in Education Research (SEER)](#). On November 30 and December 1, 2022, IES convened a technical working group (TWG) of 15 experts on education equity. The goal of the TWG was to gather input for IES's consideration regarding the existing tools and resources that the education community could use as they implement the [SEER equity standard](#) in their research, along with identifying any notable gaps where tools and resources are needed.

At the time of the TWG meeting, the SEER equity standard stated the following:

> **Researchers who are designing and testing interventions must clearly demonstrate how those interventions address education inequities, such as by improving learners' outcomes and/or their access to resources and opportunities.**

The SEER equity standard was developed by the IES Executive Team based on guidance provided by a working group originally established by the IES Diversity Council. The intent of this standard, as well as the other eight SEER standards, is to complement IES's focus on rigorous evidence building with guidance and supports for practices that have the potential to make research transformational. This intent aligns with IES's mission, as stated in the Education Sciences Reform Act of 2002 ([ESRA – P.L. 107-279](#)), to promote "educational practices that support learning and improve academic achievement and access to educational opportunities for **all** [emphasis added] students."

Prior to the TWG meeting, invited panelists were asked to prepare written feedback on the tools and resources available for researchers to effectively implement the SEER equity recommendations. The meeting began with an introduction by Mark Schneider (IES Director) and Anne Ricciuti (IES Deputy Director for Science), who discussed the importance of this work. Matthew Soldner (IES Commissioner of the National Center for Education Evaluation and Regional Assistance) and Katina Stapleton (IES Education Research Analyst) then described the purpose and development of the SEER and, more specifically, the SEER equity standard and its four accompanying recommendations.

During the 2-day meeting, panelists discussed each of the 4 SEER equity recommendations, suggested resources helpful in applying each recommendation, and offered ideas for new resources or capacity-building activities needed to support researchers in applying the SEER equity standard. The panel meeting was divided into topics aligned with each of the four SEER equity recommendations. For each topic, selected panelists delivered prepared presentations, followed by a discussion among all panelists.

Panel Discussion & Recommendations

Both in their pre-panel write up and during panel discussions, panelists recommended relevant resources and provided concrete suggestions for ways IES can support education researchers' learning and growth, including training centers, coaching sessions, webinars, checklists, and new resource development, acknowledging that different researchers may need different kinds of supports. Appendix A provides a list of existing resources, both within and outside the education field, that panelists believe may help education researchers in their effort to embed equity in their

work. These include resources suggested during the panel meeting as well as those provided in advance of the meeting.

While providing information on existing tools and resources, panelists also emphasized that existing tools and resources on their own may not be sufficient to authentically embed equity into education research without a genuine willingness among researchers to engage in this work and in a broader paradigm shift. For this reason, panelists discussed broader implications IES may want to consider as it moves forward with prioritizing an equity focus in the work it supports. As such, the meeting summary includes a mix of recommendations for tools and resources, along with important considerations for researchers, including recommendations for best practices, as they try to embed equity in their research. The summary consolidates suggestions panelists provided in their initial written feedback, during their panel presentations (see Appendix B for the full agenda), and in their comments during panel discussions.

SEER Equity Recommendation 1

> **Researchers should discuss how their study conceptualizes education equity, and how the study's design, sample, measurement, analysis, and reporting align to that conceptualization**.

Panelists generally agreed with the spirit of this recommendation but acknowledged the many challenges with "unpacking" this recommendation and putting it into practice. In particular, they highlighted that researchers need to understand issues concerning transparency in how education equity is conceptualized, the importance of articulating an equity framework from which to design a research agenda, considerations regarding how barriers to equity intersect (e.g., overlap, compound, and/or interact with each other), and ways to understand and articulate the identities and biases they bring to a study. They also acknowledged that many researchers may require support to gain the knowledge and skills needed to fully grasp how to apply this recommendation and suggested a number of ways to support both new and experienced researchers.

Be transparent about how a study conceptualizes education equity

To implement Recommendation 1, panelists said that researchers should be transparent about how they conceptualize education equity at each phase of their planned study. Many of the panelists initially questioned IES's decision not to provide a specific definition of education equity in this recommendation. They pointed out concerns with not having a common definition and conceptualization including the following:

1) Researchers without a strong background may define education equity too narrowly and overlook important contextual considerations.

2) Reviewers of proposals or products may have different conceptions of education equity, potentially leading to an unfair playing field among applicants.

3) Conceptualizing and defining equity may require significant elaboration in proposals and papers.

Despite these initial concerns, through discussions across the 2-day panel meeting, many panelists generally came to agree that flexibility in defining education equity may be warranted to account for researchers' different disciplines, backgrounds, and perspectives. They noted that there is a long tradition of research on education equity that has generated a wealth of theoretical frameworks that could inform IES-funded studies. Panelists suggested that researchers should draw on these frameworks when designing their studies and should be transparent about which and how those theoretical models of equity or disparity inform their design in their proposals. To address their concerns about not having a clear definition, panelists recommended IES do the following:

- **Articulate specific guidance or "guardrails"** around how to think about education equity in planned research in requests for proposals. For example, guidance could include how intervention outcomes data should be disaggregated and reported to demonstrate efficacy in diverse communities. In addition, requests for proposals could embed links to guidance on advancing equity through quantitative and qualitative analyses. This guidance can help mitigate the concern that researchers may articulate too narrow a conceptualization.

- **Require researchers to be transparent** and specify the theoretical framework(s) that inform their study design. This requirement would encourage education researchers to contemplate and consider in an intentional way how equity plays a role in the work they do.

- **Provide resources for researchers and reviewers to understand different conceptualizations**. Panelists provided a number of ideas for resources that may be helpful. They recommended presenting exemplars of research studies articulating conceptions of education equity. They also suggested a glossary of equity-related terms, such as *disparity* and *intersectionality*, as well as annotated examples of how studies outline the conceptual frameworks. Panelists suggested a number of existing resources that could be used in the development of such a glossary. These resources are summarized in Appendix A.

Given that the equity standard mentioned both "improving learners' outcomes" and "access to resources and opportunities," panelists noted that researchers should consider and articulate the degree to which their conceptualizations address both equitable access (to resources and opportunities) and equitable outcomes. Researchers may also consider and articulate what they mean by equitable processes and experiences, such as equitable decision-making processes at the classroom, school, and district level.

Articulate a theoretical framework that focuses on the systemic causes of inequities

Panelists believed that any conceptualization would require a perspective that considers how inequity is shaped by systems, such as institutions, policies, or practices. This perspective contrasts with a narrower conception of equity that focuses on raising achievement and reducing gaps in outcomes for individual learners without attention to how institutions, policies, or practices might play a role in disenfranchising marginalized groups (Allbright et al., 2019).

Taking an equity approach means focusing research questions and projects more on the systemic causes that produce inequities as opposed to individual characteristics (e.g., English learners) or deficits (e.g., students placed at-risk of academic failure or students who received free or reduced-price lunch). Panelists noted that focusing solely on individual outcomes overlooks the role of contextual factors in shaping the lives of individuals and historically marginalized communities.

Researchers therefore need to consider structural barriers as well as community assets and strengths as they conceptualize education equity and design studies. This might mean, for example, formulating research questions that center not only on learners but also on the policies, programs, processes, procedures, and practices that have created or contributed to inequities.

In taking a systems approach, panelists suggested researchers use existing theoretical frameworks that consider interconnected perspectives as a starting point. This may include frameworks that consider contexts in and outside of school, classroom contexts, local and national contexts, as well as policy contexts. Examples of frameworks and theories to consider include Cultural Historical Activity Theory, Quantitative Critical Theory (QuantCrit), Bronfenbrenner's Ecological Systems Theory, and Developmental Systems Theory (DST). Appendix A provides more specific resources.

Panelists noted that researchers often worry about making research too complex, but they explained that in equity-related work, the challenge and promise of learning is within the complexity. They argued that teaching and learning in the real world is complex. When researchers develop models that attempt to reduce the complexity of authentic classroom, school, district, and local community contexts, they run the risk of underestimating the dynamics at play that lead to the disparate outcomes they observe. As a result, researchers may overlook practical solutions to improving these outcomes.

In addition to exploring existing theoretical frameworks, panelists suggested researchers consider strengthening their ability to build their own theoretical models and frameworks as they carry out their research. They suggested that researchers build skills (through webinars, seminars, other interactive professional learning opportunities, or written resources) related to the following:

- **Developing or refining a theory of change** that a research study will explore and test. As discussed in Recommendation 2, testing a complex theory of change that considers equity-related concerns may require methodological flexibility.

- **Identifying the most relevant equity-focused frameworks and applying them** through the course of the research process, from inception through analysis and reporting.

- **Needs sensing and root cause analyses**. This work offers the opportunity to learn more about the community of interest and begin to identify inequitable systems within communities that may be the root causes of disparities in student outcomes.

- **Using asset mapping or other strengths-based assessments**. This may include considering students' and communities' "funds of knowledge" (that is, the knowledge and skills that historically marginalized communities have built to help them function in their community but which may be ignored by educators, policymakers, or researchers) when building a framework from which to design and test promising programs and practices that capitalize on these strengths.

- **Using a racial equity backmap**, a tool that can be helpful in identifying and understanding the drivers of inequity (Race Matters Institute, 2019).

Consider how barriers to equity intersect when designing and conducting research

Equity-focused education research requires investigators to take an intersectional perspective. That is a perspective that recognizes how an individual's identities—and potential barriers to equity—intersect (overlap, compound, and/or interact with each other). Such a perspective offers a

way to examine complexities in how institutions and power dynamics interact as well as how different populations may react to those institutions and dynamics. Intersectionality is most often considered at the individual level, where, for example, the combination of ethnicity and gender may play a role in the experience and opportunities available to a learner.

Panelists noted that intersectionality is an important issue to attend to when first learning about the population of interest, and it has implications for a study's theoretical framework, study design, data and analytic methods, and reporting. They pointed out particular population characteristics that may intersect, including gender, race, ethnicity, disability status, urbanicity/rurality, and English learner status. They also acknowledged the challenge in doing this kind of work, particularly when attempting to present descriptive information or intervention effects for very small subsamples of study participants.

A few participants acknowledged that this area is under-researched, and they recommended developing more resources to support researchers in understanding how to attend to intersectionality. One panelist recommended that IES support methods grants to explore the advantages and disadvantages of different analytic and reporting options that attend to intersectionality issues.

Articulate the identities and biases that researchers bring to a study

To fully adhere to Recommendation 1, panelists argued that researchers needed to articulate and confront the positionality—the set of social/cultural identities, beliefs, prior experiences, and biases—that they or others participating in the study, including data collectors, study partners, or study participants, have. All parties bring positionality to a study, and panelists believed it is critical for researchers to interrogate their positionality, how they may use positionality in productive ways, and the challenges they also may have based on it. Panelists recommended that researchers not only acknowledge their implicit biases and positionality but also discuss how this may influence how they carry out their research practices, analyses, and interpretations of findings.

In addition, some panelists also pointed out the importance of accurately describing the identities and experiences of individuals who will be part of the research study. For example, using terminology such as "diverse sample" may not be an accurate depiction if the sample under study comes from largely segregated schools. In addition, Black students may have very different identities and experiences depending on whether they attend predominantly White or Black schools. A study should clearly position this sample both at the study planning as well as the dissemination stages to help clarify the study participants' context. Doing so will help users of the evidence interpret and use the findings.

Panelists agreed that research proposals and reports should incorporate information regarding positionality and should include an honest reflection. However, some noted that positionality statements can be used in performative ways (e.g., cursory statements included or appended to a report). Such statements can also sometimes impose undue burden, particularly from researchers from underrepresented backgrounds. Panelists recommended providing guidance on how to present useful information in research reports that acknowledges positionality, including a transparent reflection by the research team. This reflection should cover issues related to history, culture, and context, as well as an understanding of the role the researcher(s) play within this context. It should also document the reflection process the researcher(s) undertook to determine their positionality and biases.

Panelists noted that this is not an easy task, and they provided suggestions for how researchers can be supported in this work, including the following:

- **A workshop for researchers and grant reviewers on the process of reflexivity**, a method scholars use to reflect on how their positionality, implicit biases, and confirmation biases shape research questions, data collection, analyses, and reporting (Trainor & Graue, 2014)

- **A worksheet or tool to help researchers consider their positionality** that would help researchers to explore their identities and biases and how they may inform their research

- **Exemplar statements** that articulate positionality and potential biases

SEER Equity Recommendation 2

> **When feasible, researchers should design studies that allow valid estimates to be calculated for different groups within the sample to improve our understanding of the extent to which policies, practices, and interventions yield varying outcomes for different groups, especially those groups that have been historically underserved.**

The second SEER equity recommendation focuses on issues related to measurement, study design, and analysis. Here, panelists discussed how complex contexts involved in education research require complex thinking about measurement and design. Importantly, panelists encouraged cultivating researcher skills to embed education equity into priority research questions as opposed to pulling out separate equity-related research questions, such as impacts for subgroups. "Equity-embedded" research questions might probe how contextual factors play a role in student-level interest and participation in an intervention or experiences of particular learners, such as Black or Latino learners. To put this recommendation into practice, panelists recommended that researchers cautiously examine the measures they intend to include in their study and consider validating measures with the relevant population of interest before using them or creating new measures.

Align study design and methods with equity-focused conceptual models, which may require a range of methodological tools

As noted earlier, panelists stated that an embedded equity focus has implications for framing research questions, choosing study designs, and conducting analyses to ensure that study results will yield credible information about how interventions, policies, and practices affect different groups of study participants. They noted that resources, time, or other factors often make it very difficult to obtain a sample size sufficient to obtain statistical power to detect statistically significant differences in impacts for particular groups. Concerns related to statistical power are especially challenging when defining groups based on multiple intersecting characteristics, such as Black female students. They cautioned against excluding findings simply because they lack statistical power or relegating such findings to an exploratory section. Instead, they provided the following suggestions for researchers and IES to consider:

- **Plan for realistic analyses**. Researchers should be realistic about sample sizes that may be reasonably expected and should choose study designs and timelines based on these realistic expectations. Their approaches may include, for example, oversampling particular groups of learners.

- **Consider focusing on within-community studies**. The panel acknowledged that this suggestion comes with tradeoffs related to generalizability to a broader population, a tradeoff that should be weighed against the benefit of obtaining valid estimates within the context of a particular marginalized community.

- **Build strong relationships with communities to ensure adequate recruitment**. This suggestion has implications for time, financial resources, and researcher capacity, as discussed further in Recommendation 4.

- **Use mixed-methods designs, incorporating qualitative and non-experimental methods, to expand beyond simple achievement gap analyses.** Panelists would like the research community to expand beyond a traditional notion of exploring changes in achievement gaps. They noted that typical analyses, in which traditionally marginalized students are compared against typically performing White study participants, reinforce a flawed, deficit-based approach. They instead recommend using tools such as a racial equity backmap to frame primary research questions that embed an equity focus and get to the structural drivers of inequities (Race Matters Institute, 2019). Then researchers would need to use appropriate methods to answer these more nuanced questions. Examples might include using qualitative and mixed methods to gain insight into how contexts and systems operate, exploring links between contextual factors and student outcomes, and using implementation and improvement science methods such as design-based and participatory methods that center contextual change as core to the design of interventions.

- **Consider guidance on how to communicate the promise of rigorous study designs but also offer alternatives to random assignment or other group design studies.** This should be considered particularly because some groups that are especially impacted by educational inequities may not have enough participants to reach adequate sample size or may be hesitant to engage in a study that may deny or delay the offering of a promising intervention to a control condition.

Panelists offered several resources for researchers to address these design and analytic concerns (see Appendix A) but also said that new and additional resources and opportunities would be needed to support researchers. These recommendations include the following:

- Resources or tools on how to conduct mixed methods research

- Exemplars of studies, including mixed methods studies, that address equity-embedded impact- and implementation-related research questions

- Tools to help researchers ask equity-focused research questions

- Guidance on how to communicate the sampling, study design, and recruitment strategies to ensure that communities understand the comparative benefits and tradeoffs of different study designs

- Guidance on equity considerations when doing cost studies, including examining resource allocations and cost-benefit analyses across different populations

- Encouraging researchers to collect and report descriptive data, quantitative or qualitative, for groups that are otherwise too small to calculate valid impact estimates

Incorporate measures that are valid for the population of interest and acknowledge any remaining bias in measurement

Panelists discussed several concerns about relying on traditional measures when conducting equity-focused research. In particular, they noted that assessments have the potential for bias and encouraged researchers and test developers to validate measures for different populations and to acknowledge when bias exists. They also encouraged researchers to investigate their own biases because researchers' values influence what to measure and methods of measurement. They pointed to lessons from QuantCrit research that may help inform this work (such as Castillo & Gillborn, 2022; Sablan, 2019).

Panelists agreed that measures of academic learning such as standardized tests cannot be "one size fits all" and, therefore, must be validated and tested to ensure appropriate cultural and linguistic fit. They also suggested that studies include both immediate/proximal outcomes specified in conceptual models as well as long-term/distal outcomes based on standardized measures and assess any differences in results. Panelists acknowledged that sometimes researchers are limited to the data available, and they encouraged researchers to acknowledge measures' limitations and availability of data.

In addition to participant-level outcomes, panelists also encouraged thinking about measurement at multiple levels, such as teacher, school, or other systems-level measures. Chosen measures must align with research questions. For example, mediator measures for a study focused on student achievement as a long-term outcome may include near-term measures of teacher attitudes and expectations or students' sense of belonging and engagement.

Panelists suggested providing guidance to researchers on identifying, constructing, using, and reporting measures, including the following:

- **A template for developing a data biography –** For measures incorporated in a study, whether designed by the researcher or obtained elsewhere, the panel suggested developing a "data biography" (Krause, 2019). The data biography would document the basic features of the data, including who collected and owns the data, how the data were collected, and when and where the data were collected. *We All Count* has a sample [data biography template](#) that could be used as a starting point. Panelists also discussed the potential value of IES creating a data biography for National Center for Education Statistics datasets.

- **Resources that help identify valid metrics of education equity and provide guidance on how to select thoughtfully from existing measures for particular populations –** Panelists identified several examples related to discipline measures (Bottiani et al., 2023; Curran, 2020; Girvan et al., 2019). To support this effort, panelists recommended resources such as compilations of measures that are validated across different populations. If specific measures lack validity or reliability for particular populations, then creating new measures might be warranted.

- **Resources to support measure development.** If needed, IES could provide resources and guidance on developing measures that are both psychometrically sound and both culturally and linguistically appropriate. These resources may include supports in thinking about how to engage the population of interest in the development and testing phases of measure development.

- **Resources to support equitable data collection.** IES could provide resources and guidance on how to recognize bias in measures or data collection methods, how to adapt

instrumentation so that it is culturally and linguistically appropriate, and to support the testing of adapted measures prior to their use in a full-scale study. Panelists also recommended a case study of high-quality participatory data collection and analysis activities.

- **Examples of cognitive interview protocols** that align with the study's stated theoretical framework. The intent of this resource would be to show researchers how different theories and frameworks considered for a study drive different questions researchers may ask as they examine measures' fitness for use in specific populations.

SEER Equity Recommendation 3

> **Researchers should design interventions that take into account the contexts and systems in which they will be implemented.**

Panelists generally agreed that an equity-focused approach to intervention design and testing requires intervention developers and researchers to pay careful attention to the need for and fit of an intervention, to think through whether interventions can be directly replicated or scaled across many contexts, and to consider the potential for differential functioning of an intervention across different contexts and settings.

Understand the context and needs of the learner's community

Panelists pointed out the potential dangers of inadvertently sustaining inequities by overlooking important contextual concerns when designing interventions. For example, studies that focus on reducing racial disparities in student disciplinary actions likely will be ineffective if they do not consider underlying reasons why a racial gap exists, including educator biases, school-level policies towards discipline, and students' perceptions of school climate and equity (Bottiani et al, 2017). Panelists stressed the importance of taking the time to identify and understand the preexisting conditions and context in which an intervention will be implemented. They suggested this is a critical first step in effectively designing and implementing an intervention that does no harm and has the potential to achieve desired outcomes. Panelists strongly believed researchers must think about how the content of their intervention incorporates the knowledge and needs of the community they are targeting, and they suggested methods, such as asset mapping and landscape analyses, that can help with doing so. They recommended that researchers invest time and energy in collaborating with communities to assess fit, need, and interest for an intervention in that specific context, as well as to understand that context's history and experience with the intervention or those like it.

Panelists said that in addition to examining community strengths, researchers must take the time to understand the discriminatory policies and practices that already exist within the context where an intervention may be implemented. They should examine how particular inequitable policies and practices shape participants' experiences before considering how to create new structures that might mitigate the existing challenges with the status quo.

Consider the tension between fidelity and cultural adaptation

The practice of making adaptations to facilitate an intervention's effective implementation can be in tension with preserving fidelity to the intervention model, and panelists suggested the need for

researchers and program providers to understand how to strike an appropriate balance between the two. When an intervention is adapted so that it capitalizes on and is responsive to participants' cultural wealth, community strengths, values, and beliefs, their decisions and choices should be carefully documented. Panelists also recommended that interventions be designed with this tension in mind and that researchers, program developers, and program providers embed an iterative process for balancing fidelity and culturally driven adaptation as an intervention is designed and implemented.

Do not assume that effective interventions are always scalable and replicable in other samples or communities

Panelists voiced concerns that an effective equity-based intervention may not always be scalable or replicable because, when redeployed elsewhere, it may be placed within a complex system that differs in meaningful ways from the one in which it was originally found to be efficacious. Panelists suggested that an intervention or its components have the potential to be transferable to other settings and contexts. However, they acknowledged the importance of examining the systemic factors that might influence the effectiveness of an intervention when it gets transferred to a new setting.

As discussed earlier under Recommendation 2, panelists suggested that researchers use tools from implementation science to think about how interventions can be transferred and adapted to new settings. They also recommended considering frameworks for culturally grounded intervention development in other fields, such as clinical psychology and prevention science (Barrera & Castro, 2006; Barrera et al., 2017; Castro & Yasui, 2017; Castro et al., 2004).

SEER Equity Recommendation 4

> **Researchers should describe how they will consider input from learners, educators, and/or other key stakeholders when conceptualizing, designing, and reporting the results of their research, and when considering issues critical for implementation and scaling of interventions**

Consistent with their conviction that developing and evaluating an intervention requires a solid understanding of the communities being served and their context, panelists strongly advocated for importance of prioritizing community engagement at all stages of the research and development process. This includes when developing an intervention, when evaluating it, and when reporting findings. Panelists provided suggestions about how to go about this effort.

Prioritize community engagement and participation

Panelists stressed that genuine and productive community engagement and participation require researchers' long-term investment, commitment, and willingness to engage in the work. They cautioned against "inauthentic" approaches and discussed the potential harm that could be done if researchers simply "check the boxes" to comply with requirements and involve community members in a more "tokenized" way. Panelists also warned against engaging in "helicopter research," where researchers come in, conduct research, and then leave. Panelists described varied models for how to engage partners and community members in this work, ranging along a continuum from researcher-focused approaches to those rooted in participatory methods. Panelists

noted that meaningful partnerships require long-term investments that take place before, during and after a project. However, they cautioned against overburdening community members and noted that the community-researcher relationship should be co-constructed. Panelists pointed to resources that includes the literature on community-engaged research, community-based participatory action research, and youth participatory action research.

Panelists suggested several considerations for researchers as they engage with communities in this work. They recommended that researchers identify opportunities for shared decision-making around research processes, including formulating relevant research questions, designing appropriate sampling plans, identifying the types of data to be collected in the study, and discussing data collection procedures and privacy protections. Panelists noted that "providing input" is simply a starting place. They recommended researchers develop skills to use co-design methods such as participatory action research, research-practice partnerships, design-based research, and other methodologies that fall under the broad umbrella of improvement research (Peurach et al., 2022). Panelists also suggested that researchers should consider ways to

1) engage potential program participants, such as youth, in the decision-making process

2) compensate partners for their efforts in the study design process

3) partner with community members to optimize study recruitment

4) engage with partners around appropriate language to use (for example, *Hispanic*, *Latinx*, *Latino/a*, or other terms)

5) confront warranted mistrust of research (for example, addressing the particular needs of American Indian and Alaska Native groups and understanding tribal sovereignty and implications for research reviews, approvals, and data ownership)

6) describe the role of community members in the research process

To encourage and help researchers doing this work, panelists recommended IES consider the following:

- **Share examples of protocols researchers have effectively used to conduct member checks**, also known as key informant interviews, with communities that are included in the research to seek feedback on whether researchers are understanding or misinterpreting emerging learning. Particular effort should be made to engage historically underserved populations and other groups that may not be typically enfranchised in education research.

- **Offer funding for a planning year** to engage communities in the design of a research study, including such resources as are needed to compensated participants—particularly those who have been historically underserved—for their contributions.

- **Provide sample narratives from grantees** or other researchers about how they have been able to engage communities effectively. These sample narratives might describe how grantees created and sustained diverse research teams, methods used to incorporate feedback, and descriptions of any pitfalls they encountered. This information could be generated using advisory panels. The Urban Institute has done something similar with its guide on [Engaging Stakeholders in Research](#).

Panelists also suggested that funders can encourage this work by developing mechanisms to hold researchers more accountable such as through requirements for community advisory boards and including review panel members with expertise in community engagement.

Communicate results using inclusive language

Panelists noted that when presenting results, particularly to those who are part of the community studied, researchers should be mindful of their language. Panelists pointed to an existing resource developed by Child Trends (Gross, 2020) that discusses equitable research communication guidelines, such as the following:

- Use precise language, such as saying "Black and Latino" as opposed to "people of color."

- Use "people-first language" that refers to people before their characteristics, such as "children living in rural areas" instead of "rural children," unless doing so is contrary to a community's preference.

- Avoid assumptions of difference by race, ethnicity, or other groupings based on misconceptions and stereotypes.

- Acknowldege that multiple barriers might intersect to shape inequity and members of the same group might differ in their outcomes and experiences.

- Discuss, early on, the role of context in shaping inequity.

Panelists suggested additional resources that might be helpful to researchers as they think about communication and dissemination. They included the following:

- **Sample products and dissemination plans** that effectively communicate high-quality research while reflecting a commitment to equity

- **Webinars, workshops, and other professional learning opportunities** to help researchers design communication activities aligned with the needs of the communities involved in, and affected by, the research effort

- **Language and style guides** aligned with inclusive communication and outreach methods

Thoughts on capacity-building and implications for IES

Throughout the 2-day meeting, panelists suggested a wide range of supports they believed would be helpful for researchers interested in engaging in equity-focused education research. They also offered several broader implications for IES to consider as it strives to promote this work.

Provide an array of supports that meet the needs of researchers with different levels of understanding and expertise

Panelists acknowledged that researchers come to equity-focused work from many different backgrounds, understandings, levels of interest, and willingness to engage. They also cautioned against considering a "one-size-fits-all" perspective in supporting researchers along their varied journeys. Instead, they provided suggestions for ways to encourage researchers who are new to equity-focused thinking to build understanding of the importance of this work, to cultivate and support opportunities to build expertise for those who are motivated to grow in this work, and to offer opportunities to further develop and grow this field in places where additional work is needed.

Panelists suggested that the intent of additional supports would be to build researcher capacity to

1. define and conceptualize equity

2. identify and articulate researcher bias and positionality (self-reflection at each stage of the research process, including bias among research proposal reviewers)

3. apply an asset-based perspective to research design, data collection, analysis, reporting, and dissemination

4. engage diverse communities

5. design and conduct equity-focused research

Supports may fall within three main categories:

1. experiential supports (including shadowing, mentoring, and training)

2. knowledge development (including learning about participatory approaches, needs assessments, asset mapping, and cognitive interviewing)

3. financial resources (for relationship building, asset mapping, and research planning)

Panelists pointed to some existing trainings that may be relevant to education researchers, including mixed methods workshops, by the William T. Grant Foundation as well as workshops developed through the Scholars Strategy Network.

Panelists also suggested potential new resources and professional development opportunities to help researchers develop their capacity for equity-focused research.

- **An "Equity Resources for Researchers" section** similar to or connected to the "Resources for Researchers" section on IES's current website that could include a series of short videos introducing, explaining, and providing examples of the SEER equity standard and each of the four recommendations

- **Exemplars or annotated examples** that demonstrate particular SEER equity recommendations

- **A checklist** to help researchers conduct a self-assessment of whether they meet or have plans to meet each of these four recommendations as well as specific activities and steps toward fulfilling the recommendations

- **Sample project rationale proposal excerpts** that effectively articulate the equity rationale for particular research questions and that would help researchers develop more compelling arguments around education equity and develop more fluency/comfort in articulating equity-related barriers and promising solutions (the excerpts could be a side-by-side contrast of proposal abstracts that adhere and do not adhere to the equity standard)

Potential new trainings or professional development activities might include the following:

- **Workshops** in which researchers collaborate and are guided as they apply an equity focus in considering each element of their planned study design, data collection methods, analyses, and dissemination strategy

- **Webinars, virtual office hours, on-call equity research experts, coaching, and other information-sharing and consultation opportunities** for current researchers or potential grant applicants

- **Supports for early career education researchers and trainees** that increase and strengthen the pipeline of equity-focused researchers (an example of this type of support is the equity fellowship program of the Children's Equity Project)

- **Working group sessions** where researchers can share their plans in small groups so that people can give each other feedback on their proposals, and specifically on how their plans effectively implement the SEER equity standard (these sessions could be facilitated by scholars who specialize in rigorous, quantitative approaches to equity-focused research and evaluation and others who have expertise in designing interventions that are responsive to learners' needs, cultures, and contexts)

- **Sustained, cohort-based professional learning opportunities** that span 1 or 2 years on equity topics to provide an opportunity for researchers who want to build deep expertise in equity-focused work (this level of support may require first building the capacity of a corps of experts so that they can mentor others in doing this kind of work)

- **Equity network or center** that would allow people from a range of disciplines to meet and discuss ways in which equity can be incorporated into education research (this center could convene researchers and also compile and assess the relevance of existing resources)

- **An equity track** at the annual IES principal investigators convening

Additional considerations for IES

In addition to resources, panelists provided a range of recommendations for IES to consider as it continues to support advancing equity embedded research. Their recommendations encompass three dimensions:

1. expanding the pool of researchers who have the capacity to conduct high-quality, equity-focused research

2. expanding funding opportunities for equity-focused research

3. refining proposal and review requirements so that all research considers equity

Expanding the pool of researchers

Panelists stressed the importance of expanding the pool of researchers who have the capacity to conduct high-quality, equity-focused research and cultivating a more diverse research community (building on guidance from the 2020 IES TWG on this topic). This effort may include engaging with and capitalizing on the knowledge of equity research experts who may not have a strong background in education. It may also mean continuing to advocate for and expand open access requirements to promote more equitable data sharing and remove barriers to data access. Panelists suggested other ideas, such as increased outreach and supports to scholars from traditionally marginalized groups, including those from minority-serving institutions, and ensuring diversity on reviewer panels. Panelists indicated that expanding the work would require IES leadership's commitment to understand and embrace meaningful stakeholder involvement in research. For example, they referenced work other agencies have engaged in, including the National Institutes of Health's Tribal Health Research office.

Expanding funding opportunities

Throughout the meeting, panelists offered suggestions for ways that IES could financially support advancing and improving equity-focused research. The most discussed funding-related suggestions revolved around supporting "pre-work" for activities such as asset mapping or landscape assessments. They also recommended offering more funding for partnership-building, which may include resources for compensating community members for their participation, travel funds to allow researchers to engage more frequently with communities, funding for building the capacity of

community partners, and opportunities for youth participatory action research. Panelists also recommended that more resources be invested in funding the development of validated measures that researchers can use to provide a more accurate and nuanced portrait of implementation and outcomes and support our understanding of the intersections of multiple forms of inequity.

Refining proposal and review requirements

Finally, panelists provided a wide range of considerations for IES as it offers new funding opportunities and reviews proposals. They suggest IES consider the following:

- How IES funding opportunities encourage researchers to address inequitable education contexts in their research plans

- Whether there is sufficient methodological flexibility to facilitate meaningful engagement (considering the extent to which community can inform a study's design and execution)

- How equitable the application process is, including (1) whether resources are available to applicants to help them build their capacity to design and conduct more equitable research and (2) whether the application process and requirements themselves may lead to inclusion or exclusion of particular applicants

- How equitable the funding decisions are, including understanding the extent to which certain researchers, types of researchers, or institutions are more likely to be funded

- How the role of reviewers, scoring criteria, narrative length restrictions, and the construction and composition of reviewer panels should evolve to promote strong, equity-focused research

Appendix A: Resources suggested by TWG panelists

This appendix documents resources suggested by TWG panelists, organized, when possible, by SEER equity standard recommendation. Panelists recommended resources either in their written feedback or during the course of their presentations and discussions during the 2-day meeting. In some cases, resources aligned with multiple recommendations. However, they are documented once in this appendix.

Resources relevant to Recommendation 1

Aceves, L., Ramos-Olazagasti, M., & Guzman, L. (2022). *Hispanic Center webinar compares research design approaches to transform the narrative on Latino populations*. National Research Center on Hispanic Children & Families.

Allbright, T. N., Marsh, J. A., Kennedy, K. E., Hough, H. J., & McKibben, S. (2019). Social-emotional learning practices: Insights from outlier schools. *Journal of Research in Innovative Teaching & Learning*, *12*(1), 35–52.

Andrews, K., Parekh, J., & Peckoo, S. (2019). *How to embed a racial and ethnic equity perspective in research: Practical guidance for the research process.* Child Trends.

Annamma, S. A., Connor, D., & Ferri, B. (2013). Dis/ability critical race studies (DisCrit): Theorizing at the intersections of race and dis/ability. *Race Ethnicity & Education*, *16*, 1–31.

Barrueco, S., Lopez, M., Ong, C., & Lozano, P. (2012). *Assessing Spanish-English bilingual preschoolers: A guide to best approaches and measures*. Paul H Brookes.

Career & Technical Education Research Network. (2022, October). *Equity framework for career and technical education research.*

Cerna, O., Condliffe, B., & Wilson, A. (2021). *Guiding questions for supporting culturally responsive evaluation practices and an equity-based perspective.*

Collins, P. H. (2000). Gender, black feminism, and black political economy. *The Annals of the American Academy of Political and Social Science*, *568*(1), 41–53.

Gonzalez, N., Moll, L., & Amanti, C. (2005). *Funds of knowledge: Theorizing practices in households, communities, and classrooms*. Lawrence Erlbaum.

Gross, E. (2020). *Equitable research communication guidelines.* Child Trends.

Hawn Nelson, A., Jenkins, D., Zanti, S., Katz, M., Berkowitz, E., et al. (2020). *A toolkit for centering racial equity throughout data integration.* Actionable Intelligence for Social Policy, University of Pennsylvania.

hooks, b. (1984). *Feminist theory: From margin to center*. Routledge.

King, C., Gross, E., Wahi, B., Hogenson, S., & Verbugge, J. (2021, February 17). *Data and racial equity in early childhood policy advocacy: Alliance for early success webinar series.*

Knight, G. P., Roosa, M. W., & Umaña-Taylor, A. J. (2009). *Studying ethnic minority and economically disadvantaged populations: Methodological challenges and best practices.* American Psychological Association.

Leyva, D., Weiland, C., Shapiro, A., Yeomans-Maldonado, G., & Febles, A. (2022). A strengths-based, culturally responsive family intervention improves Latino kindergarteners' vocabulary and approaches to learning. *Child Development, 93,* 451–467.

Mahabir, D. F., O'Campo, P., Lofters, A., Shankardass, K., Salmon, C., & Muntaner, C. (2021). Experiences of everyday racism in Toronto's health care system: a concept mapping study. *International Journal for Equity in Health, 20*(1), 1–15.

National Academies of Sciences, Engineering, and Medicine. (2022). *The future of education research at IES: Advancing an equity-oriented science*. The National Academies Press.

National Institute on Minority Health and Health Disparities. (2018). *National Institute on Minority Health and Health Disparities research framework* [PowerPoint slides].

Novak, J. D. (1990). Concept mapping: A useful tool for science education. *Journal of Research in Science Teaching, 27*(10), 937–949

Peña, E. D., & Halle, T. G. (2011). Assessing preschool dual language learners: Traveling a multiforked road. *Child Development Perspectives, 5*(1), 28–32.

Penuel, W. R., Fishman, B. J., Cheng, B. H., & Sabelli, N. (2011). Organizing research and development at the intersection of learning, implementation, and design. *Educational Researcher, 40,* 331–337.

Race Matters Institute. (2019). *The power of creating a racial equity backmap*. Just Partners, Inc.

Stage, F. K., & Wells, R. S. (2014). Critical quantitative inquiry in context. *New Directions for Institutional Research*, *158*, 1–7.

Starck, J. G., Riddle, T., Sinclair, S., & Warikoo, N. (2020). Teachers are people too: Examining the racial bias of teachers compared to other American adults. *Educational Researcher*, *49*(4), 273-284.

Trainor, A. A., & Graue, E. (2014). Evaluating rigor in qualitative methodology and research dissemination. *Remedial and Special Education, 35*(5), 267–274.

We All Count. (n.d.). *The data equity framework.*

Wilson, V. (2022). *Guiding principles for anti-racist research, the "bodycam" for racial economic justice.* Economic Policy Institute.

Windsor, L. C. (2013). Using concept mapping in community-based participatory research: A mixed methods approach. *Journal of Mixed Methods Research, 7*(3), 274–293.

Resources relevant to Recommendation 2

Bollmer, J., Bethel, J., Munk, T., & Bitterma, A. (2014). *Methods for assessing racial/ethnic disproportionality in special education: A technical assistance guide (revised).* Westat.

Bottiani, J. H., Bradshaw, C. P., & Mendelson, T. M. (2016). Inequality in Black and White high school students' perceptions of school support: An examination of race in context. *Journal of Youth and Adolescence*, *45*(6), 1176–1191

Bottiani, J. H., Bradshaw, C. P., & Mendelson, T. M. (2017). A multilevel examination of racial disparities in high school discipline: Black and White adolescents' perceived equity, school belonging, and adjustment problems. *Journal of Educational Psychology, 109*(4), 532–545.

Bottiani, J. H., Kush, J. M., McDaniel, H. L., Pas, E. T., & Bradshaw, C. P. (2023). Are we moving the needle on racial disproportionality? Measurement challenges in evaluating school discipline reform. *American Educational Research Journal, 60(2),* 293–329.

Castillo, W., & Gillborn, D. (2022). *How to "QuantCrit:" Practices and questions for education data researchers and users* (EdWorkingPaper: 22-546). Brown University, Annenberg Institute.

Center for Translational Neuroscience. (n.d.). *IMPACT measurement repository.*

Centers for Disease Control and Prevention. (n.d.) *Health equity considerations for developing public health communications.*

Crenshaw, K. (1991). Mapping the margins: Identity politics, intersectionality, and violence against women. *Stanford Law Review*, *43*(6), 1241–1299.

Curran, F. C. (2020). A matter of measurement: How different ways of measuring racial gaps in school discipline can yield drastically different conclusions about racial disparities in discipline. *Educational Researcher*, *49*(5), 382–387. doi:10.3102/0013189X20923348

Gaddy, M., & Scott, K. (2020). *Principles for advancing equitable data practice.* Washington, DC: Urban Institute.

Girvan, E. J., McIntosh, K., & Smolkowski, K. (2019). Tail, tusk, and trunk: What different metrics reveal about racial disproportionality in school discipline. *Educational Psychologist*, 54(1), 40–59.

Sablan, J. R. (2019). Can you really measure that? Combining critical race theory and quantitative methods. *American Educational Research Journal*, *56*(1), 178–203.

Sarche, M., Malone, L. M., Hoard, L., Barnes-Najor, J., Cameron, A., West, J., Barofsky, M., & the AIAN FACES Workgroup. (2022). Perspectives of Region XI Head Start federal, research, and program partners in carrying out a national study of American Indian and Alaska Native Head Start children, families, and programs. *American Journal of Community Psychology*, *69*(1–2), 239–253.

Walls, M. L., Whitesell, N. R., Barlow, A., & Sarche, M. (2019). Research with American Indian and Alaska Native populations: Measurement matters. *Journal of Ethnicity in Substance Abuse, 18*(1), 129–149.

Worrell, F. C., & Roberson, C. C. (2016). 2014 Standards for Educational and Psychological Testing: Implications for ethnic minority youth. In S. L. Graves & J. J. Blake (Eds.), *Psychoeducational assessment and intervention for ethnic minority children: Evidence-based approaches* (pp. 41–57). American Psychological Association.

Resources relevant to Recommendation 3

Barrera, M., Jr., & Castro, F. G. (2006). A heuristic framework for the cultural adaptation of interventions. *Clinical Psychology Science and Practice, 13*, 311–316. https://doi.org/10.1111/j.1468-2850.2006.00043.x

Barrera, M., Berkel, C., & Castro, F. G. (2017). Directions for the advancement of culturally adapted preventive interventions: Local adaptations, engagement, and sustainability. *Prevention Science*, *18*(6), 640–648.

Castro, F. G., & Yasui, M. (2017). Advances in EBI development for diverse populations: Towards a science of intervention adaptation. *Prevention Science*, *18*(6), 623–629.

Castro, F. G., Barrera, M., & Martinez, C. R. (2004). The cultural adaptation of prevention interventions: Resolving tensions between fidelity and fit. *Prevention Science*, *5*(1), 41–45.

Center for Community Health and Development. (2022). *Chapter 3. Assessing community needs and resources. Community toolbox.* University of Kansas.

Diamond, J.B. (2022, November 3). *Defending the color line: White supremacy, opportunity hoarding, and the legacy of* Brown [AERA 2022 Brown Lecture in Education Research].

García-Coll, C., Lamberty, G., Jenkins, R., McAdoo, H. P., Crnic, K., Wasik, B. H., & García, H. V. (1996). An integrative model for the study of developmental competencies in minority children. *Child Development, 67*, 1891–1914.

Gennetian, L., Cabrera, N., Crosby, D., Guzman, L., Smith, J., & Wildsmith, E. (2021). A strength-based framework for realizing Latino young children's potential. *Policy Insights from the Behavioral and Brain Sciences, 8,* 152–159.

National Student Support Accelerator. (2022). *Conducting a community landscape analysis.* Brown University.

Rogoff, B., Coppens, A., Alcala, L., Aceves-Azuara, I., Ruvalcaba, O., Lopez, A., & Dayton, A. (2017). Noticing learners' strengths through cultural research. *Perspectives on Psychological Science, 12, 876*–888.

Starck, J. G., Riddle, T., Sinclair, S., & Warikoo, N. (2020). Teachers are people too: Examining the racial bias of teachers compared to other American adults. *Educational Researcher*, *49*(4), 273–284.

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Wilsey Stirman, S., Baumann, A. A., & Miller, C. J. The FRAME: an expanded framework for reporting adaptations and modifications to evidence-based interventions. *Implementation Science, 14*(1), 1–10.

Yosso, T. (2006, August 23). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race, Ethnicity and Education, 8,* 69-91.

Resources relevant to Recommendation 4

Annie E. Casey Foundation. (2019). *A framework for effectively partnering with young people.*

Bal, A. A., & Trainor, A. A. (2016). Culturally responsive experimental intervention studies: The development of a rubric for paradigm expansion. *Review of Educational Research, 86*(2), 319–359.

Burns, J.C., Cooke, D. Y., & Schweidler, C. (2011). A short guide to community based participatory action research. Advancement Project-Healthy City Community Research Lab.

Cannata, M., & Rutledge, S. (2017). Introduction to new frontiers in scaling up research. *Peabody Journal of Education, 92*(5), 559–568.

Children's Equity Fellowship Project.(2022). Arizona State University, Center for Child and Family Success.

Derrick-Mills, Teresa. (2021). *Engaging stakeholders in research: Tips for CCDF lead agencies* (OPRE Report #2021-76). U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research, and Evaluation.

Earl, L. M. (2004). *Participatory evaluation in education: Studies of evaluation use and organizational learning*. Routledge.

Gay, G. (2001). Preparing for culturally responsive teaching. *Journal of Teacher Education, 53*(2), 106–116.

Indigenous Corporate Training, Inc. (2017, updated 2018). *Working effectively with indigenous peoples blog: 9 terms to avoid in communications*. Indigenous Corporate Training, Inc. Saanichton, BC, VBM, TTB, The traditional territory of the Tsawout First Nation.

Krause, H. (2019). An introduction to the data biography.

Kubicek, K., & Robles, M. (2016, November 11). *Developing a community advisory board for research toolkit.*

National Congress of American Indians. (2012). "*Walk softly and listen carefully": Building research relationships with tribal communities.* NCAI Policy Research Center and MSU Center for Native Health Partnerships.

Peurach, D. J., Russell, J. L., Cohen-Vogel, L., & Penuel, W.R. (2022). *The foundational handbook on improvement research in education.* Rowman & Littlefield.

Plummer, R., Smits, A., Witkowski, S., McGlynn, B., Armitage, D., Muhl, E., Johnston, J. *Stakeholders vs. rights holders in Canada.*

Racial Equity Tools. (2013). *How can we design focus groups to give us the best information possible?*

Saleh, A., Saelens, B., Hayes, M., Coker, T. R., & Health Equity Community Advisory Committee. (2022). Community partnership guide for engaging with academic researchers. *Progress in Community Health Partnerships: Research, Education, and Action*, *16*(1), 129–134.

Salinas, C. (2020). The complexity of the "x" in Latinx: How Latinx/a/o students related to, identify with and understand the term Latinx. *Journal of Hispanic Higher Education, 19*, 149–168.

Scott, L. A. (2022). *Answerability and positionality* [Paper presentation]. Teacher Education Division, Council for Exceptional Children Conference, Richmond, VA.

Shelton, R. C., Adsul, P., Oh, A., Moise, N., & Griffith, D. M. (2021). Application of an antiracism lens in the field of implementation science (IS): Recommendations for reframing implementation research with a focus on justice and racial equity. *Implementation Research and Practice, 2.*

Urban Institute. (2020). Urban Institute guide for racial equity in the research process.

Vetter, A., Faircloth, B. S., Hewitt, K. K., Gonzalez, L. M., He, Y., & Rock, M. L. (2022). Equity and social justice in research practice partnerships in the United States. *Review of Educational Research, 92*(5), 829–866.

Additional resources suggested by panelists

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American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education. (2014). *The Standards for Educational and Psychological Testing.* American Educational Research Association.

Annenberg Institute for School Reform. (n.d.). *Ed instruments.*

Annie E. Casey Foundation. (2016). *"Data walk" is a key tool in results-based leadership.*

Balazs, C. L., & Morello-Frosch, R. (2013). The three Rs: How community-based participatory research strengthens the rigor, relevance, and reach of science. *Environmental justice*, *6*(1), 9–16.

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time. *Exceptional Children*, *88*(3), 283–301.

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Carroll, S. J., & Erkut, E. (2009). *The benefits to taxpayers from increases in students' educational attainment.* Rand.

Center for Disease Control and Prevention. (n.d.) Health equity considerations for developing public health communications.

Center for Participatory Research. CBPR Conceptual Model.

Chow, J. C., Morse, A., Zhao, H., Kingsbery, C., Murray, R., & Soni, I. (2022). A systematic review of characteristics of students with emotional disturbance in special education research. *Remedial and Special Education.* Advance online publication. https://doi.org/10.1177/07419325221125890

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Culturally Responsive Pedagogy. (2022). *Funds of knowledge.*

Darity, W. A., Jr., Hamilton, D., & Stewart, J. B. (2015). A tour de force in understanding intergroup inequality: An introduction to stratification economics. *The Review of Black Political Economy*, *42*(1–2), 1–6.

DeBarger, A. H., & Chun, M. (2017). Five equity-related tensions in project-based learning: How research–practice partnerships can spread and sustain deeper learning. In B. Bevan & W. R. Penuel (Eds.), *Connecting research and practice for educational improvement* (pp. 121–134). Routledge.

Dematthews, D. E., & Izquierdo, E. (2017). Authentic and social justice leadership: A case study of an exemplary principal along the US-Mexico border. *Journal of School Leadership*, *27*(3), 333–360.

Diem, S., & Welton, A. D. (2020). *Anti-racist educational leadership and policy: Addressing racism in public education*. Routledge.

Fall, A., & Billingsley, B. S. (2011). Disparities in work conditions among early career special educators in high-and low-poverty districts. *Remedial and Special Education*, *32*(1), 64–78.

Fernández, M. E., Adsul, P., & Baumann, A. A. (2022). Implementation science and health equity panel [PowerPoint slides]. UTHealth Huston.

Fishman, B., & Penuel, W. (2018). *Design-based implementation research.* Routledge.

Frameworks Institute. (2020, June). *Talking about racial equity in education: A brief guide for advocates.*

Institute of Education Sciences. (2020). *Increasing diversity and representation of IES-funded education researchers: Technical working group summary*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Research.

Ishimaru, A. M., & Takahashi, S. (2017). Disrupting racialized institutional scripts: Toward parent–teacher transformative agency for educational justice. *Peabody Journal of Education*, *92*(3), 343–362.

Jabbar, H., & Menashy, F. (2022). Economic imperialism in education research: A conceptual review. *Educational Researcher*, *51*(4), 279–288.

Kalyanpur, M., Harry, B., & Skrtic, T. (2000). Equity and advocacy expectations of culturally diverse families' participation in special education. *International Journal of Disability, Development and Education, 47*(2), 119–136.

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Khalifa, M. A., Khalil, D., Marsh, T. E., & Halloran, C. (2019). Toward an indigenous, decolonizing school leadership: A literature review. *Educational Administration Quarterly*, *55*(4), 571–614.

Krenn, H., & Community Science. (2021). Doing evaluation in service of racial equity. W.K. Kellogg Foundation, Every Child Thrives.

Mason-Williams, L., Bettini, E., Morris Mathews, H., Boveda, M., & Rodgers, W. (2022). Disparities in teachers' access to schools' collective social assets based on role, race, and poverty. *Remedial and Special Education, 44*(1), 1–13.

Maye, M., Boyd, B. A., Martínez-Pedraza, F., Halladay, A., Thurm, A., & Mandell, D. S. (2022). Biases, barriers, and possible solutions: Steps towards addressing autism researchers' under-engagement with racially, ethnically, and socioeconomically diverse communities. *Journal of Autism and Developmental Disorders*, *52*(9), 4206–4211.

Nelson, J. (2016). *Racial equity toolkit: An opportunity to operationalize equity*. Local and Regional Government Alliance on Race & Equity.

O'Connor, M. R., Saelens, B., Makhija, N., Mendoza, J., & Coker, T. (2021). *Best practices for equitable research at each step of the research process.* Institute of Translational Health Sciences.

Power, S., & Gewirtz, S. (2001). Reading education action zones. *Journal of Education Policy*, *16*(1), 39–51.

Powers, M. D., Bottiani, J. H., & Bradshaw, C. P. (n.d.). *Measures of culturally responsive classroom practices: A systematic review* [Manuscript submitted for publication].

Rossetti, Z., Burke, M. M., Hughes, O., Schraml-Block, K., Rivera, J. I., Rios, K., Tovar, J. A., & Lee, J. D. (2021). Parent perceptions of the advocacy expectation in special education. *Exceptional Children, 87*(4), 438–457.

Ryoo, J. J. (2019). Pedagogy that supports computer science for all. *ACM Transactions on Computing Education (TOCE)*, *19*(4), 1–23.

USC Center for Urban Education (2016). *Equity by design: five principles.*

Walters, K. L., Walls, M. L., Dillard, D. A., & Kaur, J. S. (n.d.). *American Indian and Alaska Native (AI/AN) research in the health sciences: Critical considerations for the review of research applications*. National Institutes of Health.

West, E. A., Travers, J. C., Kemper, T. D., Liberty, L. M., Cote, D. L., McCollow, M. M., & Stansberry Brusnahan, L. L. (2016). Racial and ethnic diversity of participants in research supporting evidence-based practices for learners with autism spectrum disorder. *Journal of Special Education, 50*(3), 151–163.

William T. Grant Foundation. (n.d.) Reducing inequality: *Applicant guidance.*

William T. Grant Foundation. (n.d.) *Research-practice partnership tools.*

Williams, E. D. G., Smith, M. J., & Boyd, B. (2022, November 7). Perspective: The role of diversity advisory boards in autism research. *Autism*. 13623613221133633.

Wilson, S. M. & Anagnastopoulos, D. (2021). Methodological guidance paper: The craft of conducting a qualitative review. *Review of Educational Research, 91*(5), 651-670.

Appendix B: Agenda

Technical Working Group (TWG) Meeting:
Best Practices and Challenges for Embedding Equity in Education Research

November 30 – December 1, 12:00 – 5:00pm Eastern Time
Virtual Meeting

Day 1: November 30, 2022

12:00 – 12:30pm   Welcome and Meeting Overview
- Introduction to TWG meeting and Logistics (Katina Stapleton)
- Welcome (Mark Schneider, Liz Albro, & Anne Ricciuti)
- Introduction to Equity SEER principle (Matt Soldner & Katina Stapleton)
  - *Researchers who are designing and testing interventions must clearly demonstrate how those interventions address education inequities, such as by improving learners' outcomes and/or their access to resources and opportunities.*
- Meeting Goals: To end the meeting with a well-defined sense of what tools and resources are needed to support education researchers in meeting SEER equity standard
- Panel Introductions

12:30 – 2:30pm   Conceptualizing Equity in Education Research (Speakers: Yiting Chu, Elizabeth Bettini, & Julie Edmunds)
Moderator: Joan McLaughlin

The first recommendation included in the Equity SEER standard states:
Researchers should discuss how their study conceptualizes education equity and how the study's design, sample, measurement, analysis, and reporting align to that conceptualization.
In this session, we will discuss what tools and resources are needed to implement the recommendation's first clause, focusing on the conceptualization of education equity.
- Conceptualizing Educational Equity (Yiting Chu, Elizabeth Bettini)
- Developing Equity Frameworks for Education Research (Julie Edmunds)

2:30 – 3:00pm   BREAK

3:00 – 5:00pm   Embedding Equity into Education Research Study Design, Sampling, Measurement and Analysis (Speakers: Constance Lindsay, Kent McIntosh, Jessika Bottiani, Joseph Rios, & Anjali Adukia)
Moderator: Matt Soldner

During this session, the panel will continue its discussion of the first recommendation from the SEER Equity standard, with a focus on how a

study's design, measurement, and analysis aligns with the way equity is conceptualized, and what tools and resources are needed to implement these pieces.

The panel will also consider the second recommendation from the SEER Equity standard:
When feasible, researchers should design studies that allow valid estimates to be calculated for different groups within the sample to improve our understanding of the extent to which policies, practices, and interventions yield varying outcomes for different groups, especially those groups that have been historically underserved.

Day 2: December 1, 2022

12:00 – 2:00pm   Designing Interventions that Address Education Inequities (Speakers: Kimberly K. Hewitt, Diana Leyva, & Brian Boyd)
Moderator: Laura Namy

During this session, the panel will discuss tools and resources that would be helpful in implementing the third recommendation from the SEER Equity standard:
Researchers should design interventions that take into account the contexts and systems in which they will be implemented.

2:00 – 2:15pm   BREAK

2:15 – 3:30pm   Considering Stakeholder Input (Speakers: Michelle Sarche & Doré LaForett)
Moderator: Liz Albro

During this session, the panel will discuss tools and resources needed to implement the fourth recommendation from the SEER Equity standard:
Researchers should describe how they will consider input from learners, educators, and/or other key stakeholders when conceptualizing, designing, and reporting the results of their research, and when considering issues critical for implementation and scaling of intervention

3:30 – 3:45pm   BREAK

3:45 – 4:30pm   Considering Equity in Reporting and Dissemination (Speakers: Jenita Parekh & Nicole Edgecombe)
Moderator: Katina Stapleton

During this session, the panel will continue its discussion of tools and resources needed to implement the first recommendation from the SEER Equity standard, in particular how the study's analysis, reporting, and dissemination aligns to how researchers have conceptualized equity.

4:30 – 5:00pm   Moving Forward (Speakers: All TWG Panelists)
Moderator: Katina Stapleton

During this session, the panel will reflect on the discussions from both days of the meeting and will consider the tools and resources that have been identified as needed supports for meeting the SEER equity standards, provide guidance on how IES might best develop these tools and resources, and identify any that are recommend as high priority.

Equity SEER Standard

SEER Standard
- Researchers who are designing and testing interventions must clearly demonstrate how those interventions address education inequities, such as by improving learners' outcomes and/or their access to resources and opportunities.

Recommendation
- Researchers should discuss how their study conceptualizes education equity and how the study's design, sample, measurement, analysis, and reporting align to that conceptualization.
- When feasible, researchers should design studies that allow valid estimates to be calculated for different groups within the sample to improve our understanding of the extent to which policies, practices, and interventions yield varying outcomes for different groups, especially those groups that have been historically underserved.
- Researchers should design interventions that take into account the contexts and systems in which they will be implemented.
- Researchers should describe how they will consider input from learners, educators, and/or other key stakeholders when conceptualizing, designing, and reporting the results of their research and when considering issues critical for implementation and scaling of interventions