National Deaf Center on Postsecondary Outcomes

Evidence-Based Technical Assistance

NDC
National Deaf Center
on Postsecondary Outcomes

IDEAs that Work
Office of Special Education Programs
U.S. Department of Education

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Evidence-Based Technical Assistance at the National Deaf Center on Postsecondary Outcomes

Introduction

The National Deaf Center on Postsecondary Outcomes (NDC) is a technical assistance and dissemination center whose mission is to provide evidence-based strategies to deaf individuals, family members, and professionals at the local, state, and national levels with the goal of closing education and employment gaps for deaf individuals. Based on known root causes (nationaldeafcenter.org/resource/root-causes-gaps-postsecondary-outcomes-deaf-individuals) of these gaps (nationaldeafcenter.org/resource/state-rankings-postsecondary-achievement-deaf-people-2012-2016), NDC has identified key impact areas (nationaldeafcenter.org/keyimpact) to focus its technical assistance.[1,2] We take a strengths-based approach to this work. NDC strives to provide the highest-quality technical assistance to its diverse stakeholders by incorporating evidence-based practices.

Technical Assistance Topics

NDC disseminates technical assistance across an array of platforms on topics that include, but are not limited to, the following.

- College and career readiness
- Deaf-centered access services
- Assistive technology and accommodations
- Educational and employment outcomes
- Program implementation barriers and successes
- Improvement science with institutional policies and practices

Evidence-Based Interventions and Deaf Populations

Much of the information that NDC uses in its technical assistance draws upon the fields of education and social sciences. Definitions of ***evidence-based practices*** in these fields are rooted in how interventions, programs, and practices are evaluated for their effectiveness. Educational research to determine effectiveness encompasses a broad range of methodologies, including qualitative and quantitative traditions, primary and secondary data analyses.

Policymakers review educational research to determine which practices can be considered evidence-based and thus be prioritized for implementation (e.g., under the Every Student Succeeds Act [ESSA]). At the highest tier, an intervention or practice must have support from multiple studies, including randomized control trials (RCTs) and quasi-experiments that meet specific rigorous criteria, to qualify under ESSA as being evidence-based.

Identifying interventions at these highest levels of evidence can be a challenge.[3] The What Works Clearinghouse (WWC) reviews ***evidence-based interventions*** for students in general education and special education.[4,5] The American Institutes for Research has published guides (air.org/resource/crosswalk-aligning-evidence-based-clearinghouses-essa-tiers-evidence) on how to align the tiers of evidence required under ESSA with the summaries provided by clearinghouses such as the WWC.[6] These summaries classify interventions by the extent to which the available research literature demonstrates support for their effectiveness.

In research on improving postsecondary outcomes for deaf individuals, as a heterogeneous and low-incidence population, many practices do not meet the criteria for being ***evidence-based***, as defined by research-synthesizing organizations.[7] This is particularly true with studies that focus on secondary and postsecondary settings for the following reasons:

- Few researchers are trained in how to conduct valid and reliable research with deaf populations.[8] From both funding and infrastructure perspectives, it is unlikely that there will be enough qualified researchers to establish the robust evidence-based practices necessary for NDC to carry out the full scope of its work.
- The majority of research studies on outcomes for deaf individuals focus on literacy development in early childhood or elementary grades.[9] The one federally funded RCT in deaf education was conducted by the Center on Literacy and Deafness. Inferences about the efficacy of literacy interventions are not relevant to the majority of NDC's work.
- When studies with deaf populations do exist, there are often an insufficient number to establish the effectiveness of a given intervention or practice, particularly across the diverse demographics of this population. The volume of research generated in the field typically does not support the necessary synthesis of evidence across multiple studies.[7,9] Other factors, such as the type of methodologies used and the degree to which the data are published, may also have an impact on the research available for synthesis and the possibility of making inferences about intervention effectiveness for this population.[10]
- Conducting RCTs and some quasi-experimental studies can be difficult due to small sample sizes and significant variability in the demographics of the population. Important factors, such as early language models, accessible school and work environments, literacy development, and access to role models, vary significantly across the deaf population.[11] Single-case designs, as well as cognitive labs and other in-depth qualitative approaches for capturing the ways in which interventions meet the needs of this diverse population, are promising for future work.[12]

Larger conversations about evidence-based practices, particularly in healthcare fields, ask us to think more deeply about what constitutes evidence and who makes those decisions.[13,14] Work that is done with marginalized communities must be not only evidence-based, but also culturally competent.[15] A narrow definition of ***evidence*** can unintentionally further marginalize historically marginalized groups.

Though NDC recognizes the need to strengthen the evidence base for drawing inferences about the effectiveness of practices, it focuses on the broader concept of ***best available evidence*** when delivering its technical assistance.[16] NDC takes an approach similar to the one described by the National Center for Systemic Improvement in *Three Circles of Evidence-Based Decision Making in Early Childhood*, combining multiple sources of evidence to determine "what works" in a specific context. In the same way that the WWC develops its practice guides—taking into account not only research findings, but also the judgment of its panel members—NDC also takes other factors into account. More specifically, NDC's approach to technical assistance integrates evidence-based practices, current research, legislation and professional guidelines, outcomes data, case examples, professional experiences, and insight from deaf populations.

Evidence-based practices inform both the ***content*** and ***format*** of NDC's technical assistance, including strategies for stakeholders, models of technical assistance, adult learning principles, and approaches to systems change. By drawing upon evidence for both the ***what*** and the ***how*** of technical assistance, with particular attention to its fit with ***who***, NDC seeks to provide information in the most useful, relevant, and high-quality manner possible.

What Resources Does NDC Draw Upon in Technical Assistance?

As previously mentioned, NDC integrates a range of resources into its technical assistance. Each resource makes a unique and important contribution to the overall body of knowledge regarding best available evidence for practices that support positive educational and employment outcomes for deaf individuals.

EVIDENCE-BASED PRACTICES AND CURRENT RESEARCH

NDC culls information from reliable sources of research to identify potential strategies for improving postsecondary outcomes for deaf individuals. These studies include a broad range of methodologies and approaches.[17,18] In some cases, NDC collects and analyzes data as original contributions to the research base. NDC also identifies practices from allied fields that hold potential for being effective in the deaf community.

CURRENT LEGISLATION AND CASE EXAMPLES

Although NDC does not provide legal advice, it directs clients to publicly available information on current legislation and professional guidance (e.g., the Americans with Disabilities Act) when relevant.

OUTCOMES DATA

NDC summarizes and disseminates descriptive evidence from national datasets to identify disparities and trends in postsecondary outcomes at the state and national levels,[2] including potential predictors of outcomes for different subgroups of the deaf population. These summaries can provide a rare glimpse into data that are disaggregated for the deaf population and are used by a wide range of stakeholders, including media outlets, researchers, and policymakers.

PROFESSIONAL PERSPECTIVES AND GUIDANCE FROM THE FIELD

A large part of NDC's goal is to improve communication and collaboration among stakeholders. To that end, NDC facilitates discussions and information sharing aimed at creating case examples that identify practices used in the field and determine the potential for those practices to have an impact on outcomes for deaf individuals.[19]

PROFESSIONAL EXPERIENCE

Professional experience working with deaf individuals is an important resource in understanding what strategies may be effective in reducing systemic barriers and facilitating access across the diverse population. NDC draws upon professional expertise from its staff, consultants, national experts, task forces, partner organizations, external reviewers, and professional stakeholders who participate in discussion-based platforms, such as the listserv. NDC engages with professionals to (a) identify the best available evidence from reliable sources and (b) guide efforts to improve the existing body of knowledge on practices and strategies to promote access for deaf individuals.

INSIGHT FROM DEAF POPULATIONS

Evidence of effectiveness has, for many years, been determined primarily by hearing professionals working with deaf populations.[20] Yet deaf individuals have rich and valuable experiences[21,22] that are critical to understanding the systemic barriers that lead to education and employment gaps as well as strategies for navigating through them.[23] Insight from deaf populations can be gleaned at the individual and community levels.[24] When possible, NDC integrates these funds of knowledge in its strengths-based approach to improving current practices and identifying innovative approaches for consideration.

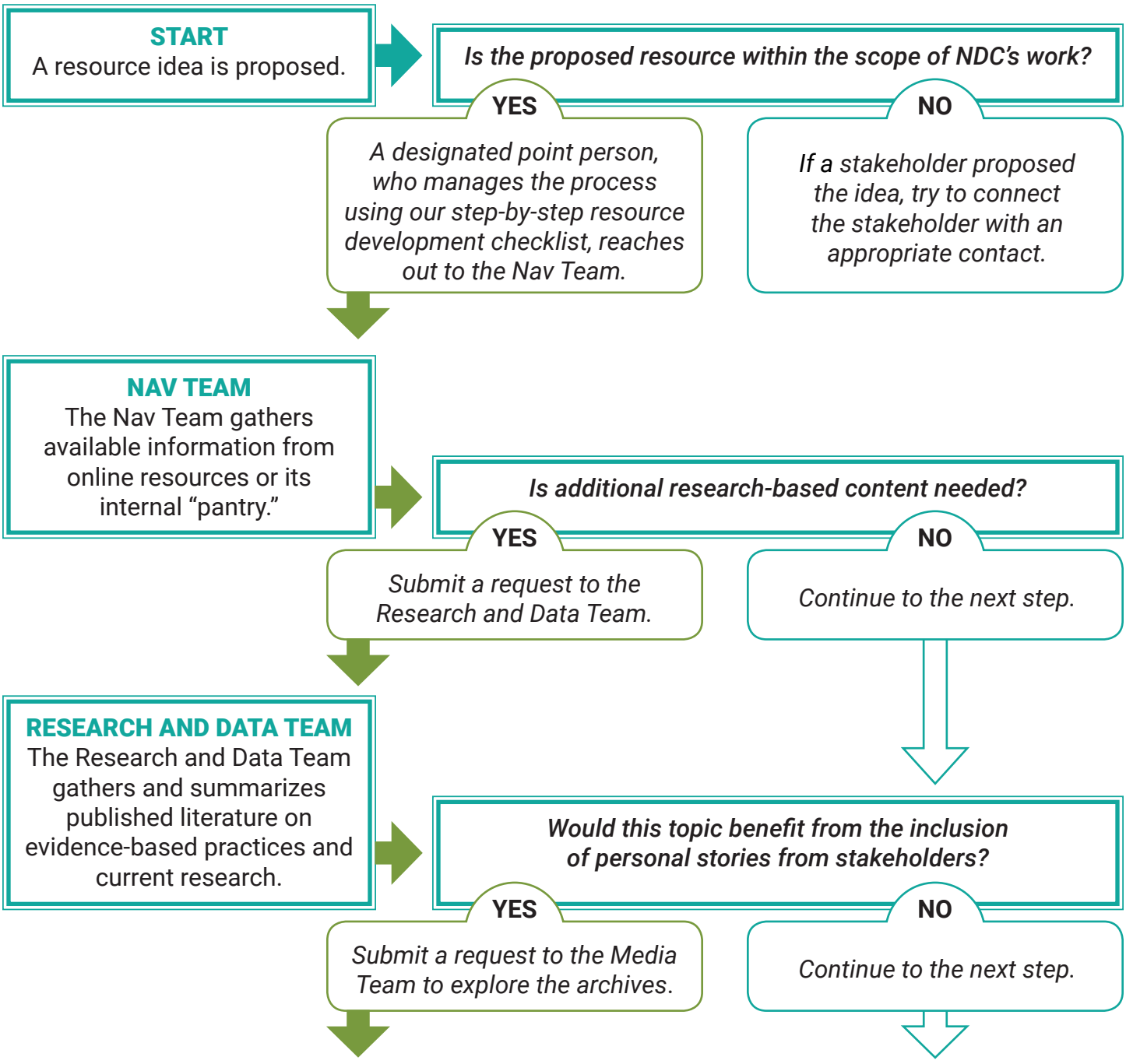
Evidence-Based Technical Assistance

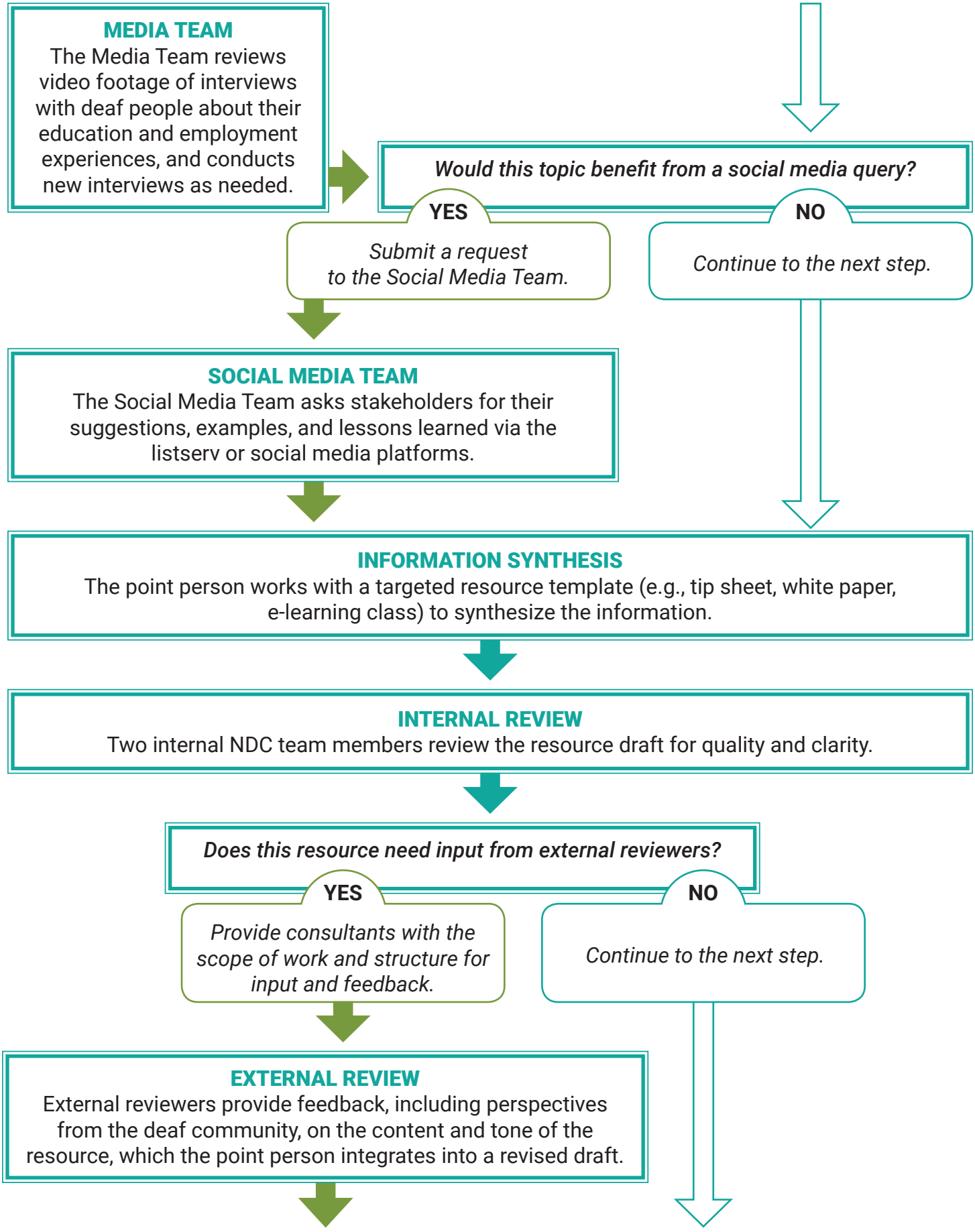
The following are examples of evidence-based practices integrated into the delivery of technical assistance.

- **Interactive** gaming platforms for youth developing self-determination skills to support successful navigation of life after high school[25,26,27,28,29,30]
- **Just-in-time learning experiences** for professionals that follow adult learning principles to support real-world problem-solving and opportunities for application[42]
- **Meaningful engagement** with stakeholders through relevant social media platforms in which challenges are met with practical solutions[30,31,32,33,34]
- **Community-based conversations** as a way to identify local needs and generate solutions that leverage the strengths and resources available within the community[35,36,37]
- **In-depth, systems approach** to increasing accessibility at select institutions and programs that have buy-in for change[38,39]
- **Improvement science** model for statewide systems change as part of collaborative state-level work across agencies[40,41]

How Does NDC Use Evidence in its Resource Development?

NDC engages daily with stakeholders working "on the ground," looking for strategies to improve the accessibility and quality of services for deaf individuals. NDC also works at a systems level to address barriers and create opportunities that will lead to sustainable change. We develop systemic technical assistance resources, which we categorize as Universal, Targeted, and Intensive, based on questions that we receive from stakeholders or areas that our team has identified as being in need of resources. The following flow chart provides an overview of the resource development process. The timeline for development varies depending on the complexity of the content and number of external stakeholders involved.





PRODUCTION TEAM

The Production Team edits and designs the resource with accessibility and audience in mind.

Is this resource a priority for translation into American Sign Language (ASL) or Spanish?

YES

Send the resource to the relevant language translation team.

NO

Continue to the next step.

LANGUAGE TRANSLATION

For ASL, a team of Certified Deaf Interpreters, content specialists, and media developers ensure that the resource is delivered in a culturally relevant and accessible manner. For Spanish, we work with professional Spanish translators, with input from Council de Manos.

ACCESS TEAM

The Access Team adds any needed accessibility features, such as voice-overs, captioning, image descriptions, or large font.

NDC TEAM INTEGRATION

Resources are shared during all-staff meetings to raise awareness of development across teams and increase our cross-sharing of resources. We consider whether the resource can be leveraged across multiple technical assistance delivery platforms. For example, we discuss whether a standalone document can be used as part of professional development opportunities, such as conferences or e-learning courses.

ITERATION AND REVISION

All NDC resources are subject to feedback and review from stakeholders, either formally via the Evaluation Team or informally during engagement with stakeholders. After sufficient data about resource quality, relevance, and usefulness are collected, recommendations for revisions are made.

References

1. Cawthon, S., & Garberoglio, C. L. (2017). *Shifting the dialog, shifting the culture: Pathways to successful postsecondary outcomes for deaf individuals*. Washington, DC: Gallaudet University.
2. Garberoglio, C. L., Palmer, J. L., Cawthon, S. W., & Sales, A. (2018). *State rankings of postsecondary achievement for deaf people: 2012–2016*. Washington, DC: National Deaf Center on Postsecondary Outcomes.
3. Hale, S., Dunn, L., Filby, N., Rice, J., & Van Houten, L. (2017). *Evidence-based improvement: A guide for states to strengthen their frameworks and supports aligned to the evidence requirements of ESSA*. San Francisco, CA: WestEd.
4. Cook, B. G., & Odom, S. L. (2013). Evidence-based practices and implementation science in special education. *Exceptional Children, 79*(2), 135–144.
5. Gersten, R., Fuchs, L. S., Compton, D., Coyne, M., Greenwood, C., & Innocenti, M. S. (2005). Quality indicators for group experimental and quasi-experimental research in special education. *Exceptional Children, 71*(2), 149–164.
6. Midwest Regional Educational Laboratory. (2018). *Aligning evidence-based clearinghouses with the ESSA tiers of evidence*. Retrieved from www.air.org/resource/crosswalk-aligning-evidence-based-clearinghouses-essa-tiers-evidence
7. Luckner, J. (2017). Research synthesis. In S. Cawthon & C. L. Garberoglio (Eds.), *Research in deaf education: Contexts, challenges, and considerations* (pp. 325–340). New York, NY: Oxford University.
8. Luckner, J. I., Sebald, M., Cooney, J., Young III, J., & Muir, S. G. (2005). An examination of the evidence-based literacy research in deaf education. *American Annals of the Deaf, 150*(5), 443–456.
9. Trezek, B., & Wang, Y. (2017). Evaluating evidence-based practices in reading interventions for deaf students. In S. Cawthon & C. L. Garberoglio (Eds.), *Research in deaf education: Contexts, challenges, and considerations* (pp. 277–308). New York, NY: Oxford University.
10. Cheung, A. C. K., & Slavin, R. E. (2015). *How methodological features affect effect sizes in education*. Retrieved from www.bestevidence.org/word/methodological_Sept_21_2015.pdf
11. Mitchell, R. (2017). Demographics for deaf education. In S. Cawthon & C. L. Garberoglio (Eds.), *Research in deaf education: Contexts, challenges, and considerations* (pp. 93–120). New York, NY: Oxford University.
12. Antia, S., Guardino, C., & Cannon, J. (2017). Single-case design. In S. Cawthon & C. L. Garberoglio (Eds.), *Research in deaf education: Contexts, challenges, and considerations* (pp. 225–251). New York, NY: Oxford University.
13. Satterfield, J. M., Spring, B., Brownson, R. C., Mullen, E. J., Newhouse, R. P., Walker, B. B., & Whitlock, E. P. (2009). Toward a transdisciplinary model of evidence-based practice. *The Milbank Quarterly*, *87*(2), 368–390.

14. Wall, S. (2008). A critique of evidence-based practice in nursing: Challenging the assumptions. *Social Theory & Health, 6*(1), 37–53.

15. Engebretson, J., Mahoney, J. S., & Carlson, E. D. (2008). Cultural competence in the era of evidence-based practice. *Journal of Professional Nursing, 24*(3), 172–178.

16. Kvernbekk, T. (2016). *Evidence-based practice in education: Functions of evidence and causal presuppositions*. London, United Kingdom: Routledge.

17. Easterbrooks, S. (2017). Conceptualization, development, and application of research in deaf education: From phenomenon to implementation. In S. Cawthon & C. L. Garberoglio (Eds.), *Research in deaf education: Contexts, challenges, and considerations* (pp. 1–32). New York, NY: Oxford University.

18. Silverstein, L. B., & Auerbach, C. F. (2009). Using qualitative research to develop culturally competent evidence-based practice. *American Psychologist*, *64*(4), 274–275. doi:10.1037/a0015439

19. Enns, C. (2017). Making the case for case studies in deaf education. In S. Cawthon & C. L. Garberoglio (Eds.), *Research in deaf education: Contexts, challenges, and considerations* (pp. 203–224). New York, NY: Oxford University.

20. De Clerck, G. A. M. (2010). Deaf epistemologies as a critique and alternative to the practice of science: An anthropological perspective. *American Annals of the Deaf, 154*(5), 435–446.

21. Holcomb, T. (2010). Deaf epistemology: The deaf way of knowing. *American Annals of the Deaf, 154*(5), 471–478.

22. Kovarsky, D. (2008). Representing voices from the life-world in evidence-based practice. *International Journal of Language & Communication Disorders, 43*, 47–57.

23. Graham, P., & Horejes, T. (2017). Why positionality matters in deaf education research: An insider ethnographic perspective. In S. Cawthon & C. L. Garberoglio (Eds.), *Research in deaf education: Contexts, challenges, and considerations* (pp 55–74). New York, NY: Oxford University.

24. Singleton, J., Jones, G., & Hanumantha, S. (2017). Deaf community involvement in the research process: An examination of barriers and strategies in research in deaf education. In S. Cawthon & C. L. Garberoglio (Eds.), *Research in deaf education: Contexts, challenges, and considerations* (pp. 75–92). New York, NY: Oxford University.

25. Garberoglio, C. L., Schoffstall, S., Cawthon, S., Bond, M., & Ge, J. (2014). The role of self-beliefs in predicting postschool outcomes for deaf young adults. *Journal of Developmental and Physical Disabilities, 26*(6), 667–688. doi:10.1007/s10882-014-9388-y

26. Gredler, M. (1997). *Learning and instruction: Theory into practice* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.

27. Test, D. W., Mazzotti, V. L., Mustian, A. L., Fowler, C. H., Kortering, L., & Kohler, P. (2009). Evidence-based secondary transition predictors for improving postschool outcomes for students with disabilities. *Career Development for Exceptional Individuals, 32*(3), 160–181.

28. Lee, S. Y. (2015). Homophily and social influence among online casual game players. *Telematics and Informatics, 32*(4), 656–666.

29. Luckner, J. L., & Sebald, A. M. (2013). Promoting self-determination of students who are deaf or hard of hearing. *American Annals of the Deaf, 158*(3), 377–386. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/24133961

30. Van Eck, R. (2006). Digital game-based learning: It's not just the digital natives who are restless. *EDUCAUSE Review, 41*(2), 16–30.

31. Berger, J. (2016). *Contagious: Why things catch on*. New York, NY: Simon & Schuster Paperbacks.

32. Gavril, A. (2018, April 7). Six effective social media engagement strategies to try today [Blog post]. Retrieved from www.123-reg.co.uk/blog/social-media/six-effective-social-media-engagement-strategies-try-today

33. Gelobter, M. (2015). *Lean startups for social change: The revolutionary path to big impact*. Oakland, CA: Berrett-Koehler.

34. Roth, T. (2017, March 23). Crowdsourcing: Practical insights for entrepreneurs, investors, and philanthropists. [Blog post]. Retrieved from https://goldhirshfoundation.org/blog/2017/03/23/crowdsourcing

35. Campbell, C., Nhamo, M., Scott, K., Madanhire, C., Nyamukapa, C., Skovdal, M., & Gregson, S. (2013). The role of community conversations in facilitating local HIV competence: Case study from rural Zimbabwe. *BMC Public Health*, *13*(354), 1–15.

36. Kegler, M. C., & Wyatt, V. H. (2003). Multiple case study of neighborhood partnerships for positive youth development. *American Journal of Health Behavior*, *27*(2), 156–169.

37. Redmond, C., Spoth, R. L., Shin, C., Schainker, L. M., Greenberg, M. T., & Feinberg, M. (2009). Long-term protective factor outcomes of evidence-based interventions implemented by community teams through a community-university partnership. *Journal of Primary Prevention*, *30*, 513–530.

38. Shogren, K. A., Wehmeyer, M. L., & Lane, K. L. (2016). Embedding interventions to promote self-determination within multitiered systems of supports. *Exceptionality*, *24*(4), 213–224.

39. Technical Assistance & Dissemination Network. (2014). *Intensive technical assistance summary of focus group results*. Retrieved from https://osepideasthatwork.org/sites/default/files/documents/TAFocusGroupFinal1214.pdf

40. Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahiew, P. G. (2015). *Learning to improve*. Cambridge, MA: Harvard Education.

41. Park, S., Carver, P., Nordstrom, L., & Hironaka, S. (2013, May). Continuous improvement in education [Blog post]. Retrieved from www.carnegiefoundation.org

42. Knowles, M. S., Holton, E. F. III, & Swanson, R. A. (2011). *The adult learner* (7th ed.) Burlington, MA: Elsevier.

This document was developed under a jointly funded grant through the U.S. Department of Education's Office of Special Education Programs and the Rehabilitation Services Administration, #H326D160001. However, the contents do not necessarily represent the positions or policies of the federal government.