

TECHNOLOGY AND K-12 EDUCATION: THE NCES ED TECH EQUITY INITIATIVE THE FRAMEWORK

The National Center for Education Statistics (NCES) is the primary federal entity responsible for collecting and analyzing data related to education in the U.S. and other nations. In carrying out this mission, NCES has found that inequities in student achievement persist, but may differ when technology (i.e., digital resources) is a factor.

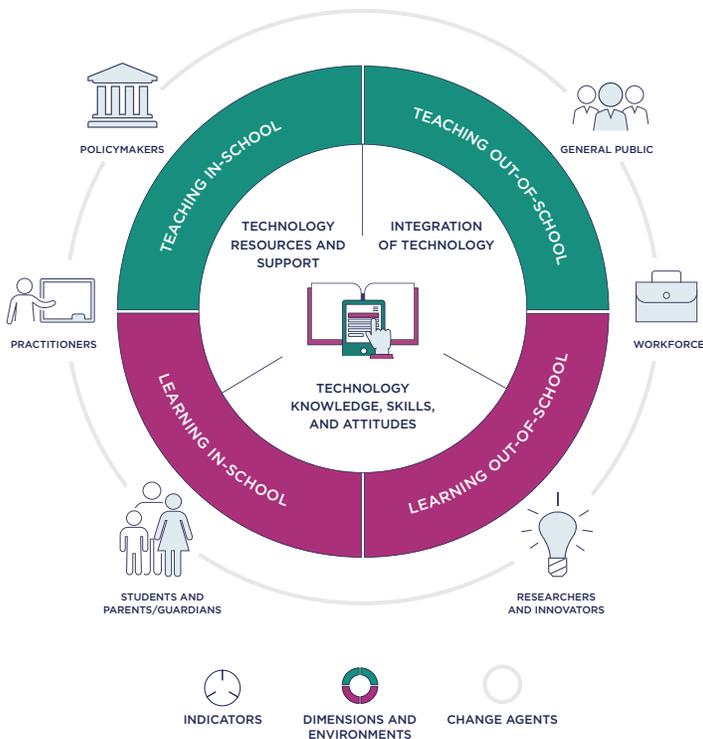
NCES designed *The NCES Ed Tech Equity Initiative Framework* (the Framework) as a guide to ensure that NCES' technology-related efforts are focused on the most critical areas that inform the relationship between technology and K-12 education. More specifically, ed tech equity (education technology and equity) refers to differences across students' educational experiences and outcomes when technology is a factor, with a particular focus on key subgroups (e.g., by English language learner status, disability status, geographic location, race/ethnicity, sex, socioeconomic status, etc.).

NCES conducted extensive internal and external research to gain a thorough understanding of ed tech equity in the context of K-12 education. In addition to analyzing NCES' existing technology-related efforts, NCES completed an external literature review. After drafting an initial version of the Framework, NCES consulted a panel of renowned ed tech equity experts—including policymakers, practitioners, researchers, and innovators—to assess the preliminary version of the Framework and provide insight and recommendations to help the Framework better serve its intended purpose. Finally, using the expert panel's input as a guide, NCES refined the Framework to better guide its ed tech equity efforts. This Framework is not static; rather, it will evolve over time to remain aligned with changes in ed tech equity and K-12 education.

Ultimately, the Framework will assist NCES in providing invaluable information to answer the question, “*When technology is a factor, what is the difference between K-12 students' educational experiences and outcomes across key subgroups?*” Through *The NCES Ed Tech Equity Initiative*, NCES will equip stakeholders with the information they need to make better informed decisions related to technology.

COMPONENTS OF THE FRAMEWORK

The survey questions NCES will use to collect ed tech equity data align with the various components of the Framework. The interaction of the Framework's components inform ed tech equity.



INDICATORS represent the broad categories that will be used to capture the most critical technology-related data needed to inform the relationship technology has with K-12 students' educational experiences and outcomes.

- 🕒 **TECHNOLOGY RESOURCES AND SUPPORT** is the availability of tech-based resources (e.g., internet, tablets, software, etc.) and the infrastructure in place to sustain and enhance the quality of those resources (e.g., staff with technology expertise).
- 🕒 **INTEGRATION OF TECHNOLOGY** focuses on how, where, when, and why technology is incorporated into students' educational experiences and the frequency of technology use.
- 🕒 **TECHNOLOGY KNOWLEDGE, SKILLS, AND ATTITUDES** refers to individuals' technology-related knowledge and skill and the ability to apply that knowledge and skill (e.g., use of learning games in the classroom as a teaching tool). This indicator also captures one's perception of technology (e.g., a useful tool that can improve learning or a complicated tool that should not be used in teaching).

DIMENSIONS are the key contexts in which NCES will focus its observation of the Framework’s indicators.

 **TEACHING** includes activities that involve the facilitation of acquiring knowledge and skills by a formal (e.g., classroom teacher) or informal teacher (e.g., a museum curator providing a tour during a field trip).

 **LEARNING** is the acquisition of knowledge and skills through study, experience, or being taught—whether formal (e.g., learning coding through a teacher at school) or informal (e.g., learning coding through a YouTube tutorial).

ENVIRONMENTS are the settings in which each indicator will be evaluated.

 **IN-SCHOOL** refers to any activity that is initiated by, facilitated by, or directly associated with a school (e.g., home school, virtual school, etc.)—during or outside of school hours (e.g., an after-school program), on or beyond school premises (e.g., a field trip).

 **OUT-OF-SCHOOL** includes any activity that is not initiated by, facilitated by, or directly associated with a school (e.g., parents, nonprofit initiatives, community organizations, etc.).

CHANGE AGENTS are the key stakeholders that impact or influence students’ educational experiences and outcomes. A stakeholder may align with more than one category.

 **POLICYMAKERS** are responsible for establishing laws and policies, as well as making resource allocation decisions at the school, district, state, and/or national levels (e.g., Congress, state and district leaders, etc.).

 **PRACTITIONERS** determine how to use and/or whether to use technology as a tool in students’ educational experiences (e.g., teachers, technology integration specialists, etc.).

 **STUDENTS AND PARENTS/GUARDIANS** engage in learning and/or have significant influence on students’ access to and use of technology.

 **RESEARCHERS AND INNOVATORS** investigate or evaluate the use of technology in education (e.g., academics) and/or create innovative products and services that can be used in education (e.g., technology developers).

 **WORKFORCE** includes entities and individuals who serve as employers and can inform the level of knowledge and skill needed to succeed in a given field.

 **GENERAL PUBLIC** includes individuals and entities who are interested in and influence the condition of our nation’s education system (e.g., media, advocates, etc.).

GLOSSARY

ED TECH EQUITY: education technology and equity—the difference between students’ educational experience and outcomes when technology is a factor, with a particular focus on key subgroups (e.g., by English language learner status, disability status, geographic location, race/ethnicity, sex, socioeconomic status, etc.).

ED TECH EQUITY EXPERTS: individuals—including policymakers, practitioners, researchers, and innovators—with extensive expertise as it relates to ed tech equity in the context of K-12 education.

TECHNOLOGY: digital resources (e.g., internet, smart phones, laptops, tablets, and software).

ADDITIONAL RESOURCES

AN OVERVIEW OF THE INITIATIVE: to learn more about this exciting work, explore *The NCES Ed Tech Equity Initiative* brochure.

ADVANCING THE INITIATIVE: for an overview of the key steps NCES is taking to advance this work, explore *The NCES Ed Tech Equity Initiative* infographic.

DATA COLLECTION PRIORITIES: for information about the specific subtopics that NCES will prioritize within each of the Framework indicators, explore *The NCES Ed Tech Equity Initiative Data Collection Priorities* fact sheet.

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