



Next stop, access!

BEFORE YOU READ

This document is a preread companion to the Electric School Bus Initiative and SeededGround working paper “Next stop, access! An exploratory paper on disability rights and justice throughout the transition to electric school buses.” This preread provides readers further background on the disability and environmental justice research lens used throughout the working paper and definitions for key concepts referenced in the research.

WHERE WE GROUND: DISABILITY JUSTICE AND ENVIRONMENTAL JUSTICE

About disability justice

The disability justice (DJ) framework was established by a group of queer and disabled activists of color connected through Sins Invalid, a performing arts organization. In 2005, Stacey Park Milburn, Pattie Berne, and Mia Mingus, alongside many others, first defined DJ in response to a lack of equity and access within the disability rights movement. DJ offered a principled framework and intentional space and safety for people experiencing multiple levels of oppression. Unlike the independence and compliance foci of a rights-based framework, DJ requires collective action and a focus on the whole experience of individuals, with efforts led by those most impacted (Sins Invalid 2015).

About environmental justice

Like DJ, the environmental justice (EJ) framework is rooted in communities of color. Shaped by extraordinary advocates such as Dr. Robert Bullard and Hazel Johnson, EJ focuses on addressing systemic inequities that result in disproportionate environmental harm on marginalized communities. The EJ movement actively seeks to change the environmental, economic, political, and social conditions that directly and indirectly harm communities. Delegates of the 1991 First National People of Color Environmental Leadership Summit, held in Washington, DC, rooted EJ in 17 principled commitments. The EJ framework offers guidance on how to acknowledge, analyze, and rectify the ways the environment impacts public, physical, mental, and spiritual health and well-being (First National 1991).

KEY DEFINITIONS

TERM	DEFINITION
Accessible school bus	<p>Commonly defined as a bus equipped with a power wheelchair lift (often located at the rear or center of the vehicle), or a bus with a retractable entryway ramp (often located at the front of the vehicle). This also includes designated wheelchair securement areas in addition to wheelchair tie-downs to prevent movement during transit. A bus with these features offers access for students and adults with physical disabilities (US Access Board 2016).</p> <ul style="list-style-type: none"> ▪ For the purposes of the working paper, accessibility is defined as something far broader than simple wheelchair access. This definition includes any designs and devices that allow students with diverse disabilities to reliably ride on school buses with ease, comfort, and safety. Accessibility is thus achieved through recognition of individual needs, adaptable approaches that support diverse disabled bodies and minds, dependable equipment, and trained bus operators and bus monitors and aides. ▪ Furthermore, the working paper seeks to stretch the possibilities of how accessible school bus features are defined. For instance, research participants provided several innovative and insightful ideas for how access can evolve alongside electric vehicles. Participants shared that less commonly referenced, but equally as important, accessibility features can include adaptable seats and seatbelts, storage spaces, temperature regulation, air ventilation, audiovisual communications, and reduced stimulation (noise, vibration, etc.). Their suggestions are further outlined throughout the working paper’s “Key findings” section.
Disability justice	<p>A framework that values diversity in all forms of disability and promotes access, self-determination, and interdependence. It recognizes the complexities of multiple marginalized disabled people and aims to be holistic in recognizing these complexities. The 10 principles of disability justice include the following:</p> <ol style="list-style-type: none"> 1. Intersectionality 2. Leadership of those most impacted 3. Anti-capitalist politic^a 4. Commitment to cross-movement organizing 5. Recognizing wholeness 6. Sustainability 7. Commitment to cross-disability solidarity 8. Interdependence 9. Collective access 10. Collective liberation (Sins Invalid 2015)
Disability rights	<p>Federal, state, Tribal, and local laws that provide protections for people with disabilities include the following three major pieces of legislation (Southwest ADA Center 2018):</p> <ul style="list-style-type: none"> ▪ The Americans with Disabilities Act (ADA) prohibits discrimination against people with disabilities in several areas, including employment, transportation, public accommodations, communications, and access to state and local government programs and services (US Access Board n.d.). ▪ Section 504 of the Rehabilitation Act of 1973 prohibits discrimination against people with disabilities under any program or activity receiving federal financial assistance, or under any program conducted by any executive agency or by the US Postal Service (OCR 2023). ▪ The Individuals with Disabilities Education Act (IDEA) is a law that makes available a free appropriate public education to eligible children with disabilities and ensures special education and related services to those children (OSERS n.d.).

TERM	DEFINITION
Environmental justice	<p>The principle of ensuring equitable treatment and active engagement of all individuals, irrespective of their race, color, national origin, or income, in the creation, implementation, and enforcement of environmental laws, regulations, and policies, while securing equal access to environmental safeguards and advantages in their communities. Environmental justice is characterized by 17 principles:</p> <ol style="list-style-type: none"> 1. Environmental justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction. 2. Environmental justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias. 3. Environmental justice mandates the right to ethical, balanced, and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things. 4. Environmental justice calls for universal protection from nuclear testing, extraction, production, and disposal of toxic/hazardous wastes and poisons and nuclear testing that threaten the fundamental right to clean air, land, water, and food. 5. Environmental justice affirms the fundamental right to political, economic, cultural, and environmental self-determination of all peoples. 6. Environmental justice demands the cessation of the production of all toxins, hazardous wastes, and radioactive materials, and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production. 7. Environmental justice demands the right to participate as equal partners at every level of decision-making, including needs assessment, planning, implementation, enforcement, and evaluation. 8. Environmental justice affirms the right of all workers to a safe and healthy work environment, without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards. 9. Environmental justice protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care. 10. Environmental justice considers governmental acts of environmental injustice a violation of international law, the Universal Declaration On Human Rights, and the United Nations Convention on Genocide. 11. Environmental justice must recognize a special legal and natural relationship of Native Peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination. 12. Environmental justice affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of all our communities, and providing fair access for all to the full range of resources. 13. Environmental justice calls for the strict enforcement of principles of informed consent and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color. 14. Environmental justice opposes the destructive operations of multinational corporations. 15. Environmental justice opposes military occupation, repression, and exploitation of lands, peoples and cultures, and other life forms. 16. Environmental justice calls for the education of present and future generations that emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives.

TERM	DEFINITION
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Environmental justice (cont.) 17. Environmental justice requires that we, as individuals, make personal and consumer choices to consume as little of Mother Earth's resources and to produce as little waste as possible and to make the conscious decision to challenge and reprioritize our lifestyles to ensure the health of the natural world for present and future generations. (First National 1991)

Intersectionality A term coined by Kimberlé Crenshaw in 1989, intersectionality illuminates how various social categorizations such as gender, race, ethnicity, sexual orientation, gender identity, disability, and class intersect within an individual or group, resulting in interconnected systems of discrimination and disadvantage. It stresses that these inequalities are mutually reinforcing, demanding a simultaneous examination and remedy to prevent one form of discrimination from amplifying another (Crenshaw 1989).

Person-first language vs. Identity-first language Person-first language emphasizes the person before their disability, such as phrases like "a person who is blind" or "individuals with spinal cord injuries." Identity-first language places the disability at the forefront, such as phrases like "a deaf person" or "an autistic child." The choice between person-first and identity-first language should be based on personal preference, and when uncertain, it is best to ask the individual for their preference directly.

School bus types



Type A

A small conversion bus using a cutaway front section with a left side vehicle driver's door.

Type B

A small school bus with the entrance door located behind the front wheels.

Type C

A large school bus with the entrance door being behind the front wheels. It is also known as a conventional style school bus.

Type D

A large bus with the entrance door located ahead of the front wheels; also known as a rear engine or front engine transit-style school bus.

Source: GAO presentation of 2015 National School Transportation Specifications and Procedures. | GAO-17-209.

The four primary types of school buses are categorized based on size and design. The new buses referred to in the transition have electric power sources instead of diesel and other internal combustion engines.

- Type A:** Type A buses are the smallest school buses on the road, designed to carry 10–30 passengers. Type A school buses play an important role in special education student transportation. One reason for this is that special education routes are often door-to-door and pick up a small group of students, making a larger bus unnecessary. Type A buses most commonly run on gasoline and are built on a Ford or General Motors cutaway-cab chassis platform. This design is akin to a big pickup truck without a bed but with a school bus body integrated on the back. Currently, nine available electric school bus (ESB) Type A models have the capacity to be equipped with ADA lifts.

TERM	DEFINITION
School bus types (cont.)	<ul style="list-style-type: none"> ▪ Type B: These buses are no longer manufactured. No Type B buses are slated to be incorporated into the electric school bus transition; however, for awareness purposes, a “Type B school bus” is a conversion or body constructed and installed on a van or front-section vehicle chassis, or stripped chassis, with a gross vehicle weight rating of more than 10,000 pounds, designed for carrying more than 10 people. There are very few Type B buses on the road today. ▪ Type C: Type C buses are the classic conventional school buses that most people think of and account for about 70 percent of school buses in the United States. Type C buses have a long body and are designed to carry 36 to 77 passengers. Type C buses have a distinctive hood or “nose” on the front of the vehicle, designed to house the internal combustion engine (this houses different components on an ESB). The door to this type of bus is always located behind the front wheels. Type C buses usually run on diesel, but quite a few propane and compressed natural gas (CNG) models are in circulation as well. All currently available Type C ESBs have the capacity to be equipped with ADA lifts. ▪ Type D: Type D buses are the largest school bus type, carrying up to 90 passengers. Type Ds account for about 20 percent of the school bus market. Type D buses are “transit style,” with the front of the bus being flat. The engine can be mounted in the front, beneath the driver’s seat, or in the rear of the bus. The door to the bus is located ahead of the front wheels. Type D buses usually have undercarriage storage and for this reason are commonly used for school field trips and sports teams. Type D buses can be equipped with wheelchair lifts, but this is less common. Type Ds usually run on diesel, sometimes on CNG. All currently available Type D ESBs have the capacity to be equipped with ADA lifts (Huntington et al. 2023).

Students with disabilities / disabled students

Multiple assessment factors are used to determine a student’s disability. However, many students of color, students in low-income areas, and immigrant families face inequitable access to required diagnostic testing and medical documentation. These metrics also do not account for alternative ways of validating “embodied knowledge” concerning body-mind awareness, family histories, and lived experiences. For the purposes of this working paper, the phrases “students with disabilities,” “disabled students,” “adults with disabilities,” and “disabled adults” will refer to but are not limited to people with the following conditions:

- Physical or mobility disabilities
- Cognitive or intellectual disabilities
- Hearing loss or deafness
- Vision loss or blindness
- Deaf-blindness
- Speech or communication disabilities
- Learning disabilities
- Mental health or psychiatric disabilities
- Traumatic brain injuries
- Autism
- Chronic illnesses

TERM	DEFINITION
Universal design	<p>Also referred to as inclusive design, accessible design, or accessibility design, universal design refers to the design and manufacturing of vehicles (school buses) with specifications that accommodate the broadest spectrum of potential users. This approach emphasizes the inclusion of disabled students by integrating accessibility features into the design from the outset rather than adding them as modifications.</p> <p>According to the American Public Transportation Association, “Universal design is the design of equipment, environments and services to be usable by all people, to the greatest extent possible, without the need for adaption [sic] or specialized design regardless of gender, ethnicity, health, size, ability, disability or other factors that may be pertinent. Universal design is the implementation of a process that improves the quality of life and greatly improves independence by enabling and empowering a general, yet diverse, world population to achieve optimal human performance, health and wellness through equal access to all facilities and social participation” (APTA 2020).</p>

Note: ^a As written in the original.

Thank you for reading “Next stop access! Before you read.” Please continue to the working paper, “Next stop, access! An exploratory paper on disability rights and justice throughout the transition to electric school buses,” which can be accessed through DOI doi.org/10.46830/wriwp.23.00046.

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ABOUT ELECTRIC SCHOOL BUS INITIATIVE

In 2020, WRI was awarded a \$30 million gift by the Bezos Earth Fund to launch the Electric School Bus Initiative (ESB Initiative). In collaboration with partners and communities, WRI's ESB Initiative aims to build unstoppable momentum toward the equitable transition of the US school bus fleet to electric by 2030, bringing health, climate, and economic benefits to children and families across the country. The ESB Initiative seeks to engage with the broader constellation of e-bus stakeholders to influence and build on growing electrification momentum by offering technical assistance to school districts, convening industry experts in working groups, collecting data, providing analysis for research dissemination, advocating for policies at the federal and state level, and engaging in a variety of partnerships with environmental, equity, and community organizations.

ABOUT SEEDEDGROUND

SeededGround, formed by Justice Shorter, is an agency devoted to content creation that centers people with disabilities in general and people of color with disabilities in particular. We sow justice and harvest dreams through projects that are imaginative and intersectional. Projects are curated in consideration of community needs, creative capacities, and client requests. Our portfolio is comprised of projects that involve accessibility standards and practices, cultural work, advocacy campaigns, cross-movement organizing, multimedia productions, strategic and operational plans, research studies, generative gatherings, and archival efforts. Our work is lovingly wedded to world-building disabled dreams into fruition.

ABOUT WRI

World Resources Institute is a global research organization that turns big ideas into action at the nexus of environment, economic opportunity, and human well-being.



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