Speaker 1: [00:00:30] Welcome to our video for high-leverage practice number 19, use assistive and instructional technology. There are 22 high-leverage practices for supporting students with disabilities grouped into four domains. HLP 19 use of assistive and instructional technology falls under the instruction domain. [00:01:00] The major sources for content in this video is the chapter by Maya Israel in the HLP for Inclusive Classrooms book published by Routledge and CEC, the Center on Inclusive Technology and Education Systems, and the National Center on Accessible Educational Materials for Learning.

 Part one, definitions and rationale. HLP 19 use assistive and instructional technology may be the broadest HLP within [00:01:30] the instruction domain due to the expansive range of technology options and their varied purposes for teaching and learning. As such, simply recommending the use of technology for teaching and learning is too vague to effectively guide practice. HLP 19 requires an understanding of how technology impacts student performance on a wide range of tasks including academic, behavior, mobility, and communication.

 Because the right technology [00:02:00] solutions can alleviate barriers in learning environments, HLP 19 is all about helping teachers be more conscientious and planful about matching assistive technology or AT with students individual needs and selecting instructional technology or IT solutions that are accessible for students with and without disabilities. Assistive technology, a device and a service. The definitions of [00:02:30] AT devices and services are codified in several federal statutes, including IDEA Section 300.105 of the final regulation of IDEA. Under section 300.5 AT devices are any item, piece of equipment or product system, whether acquired commercially off the shelf, modified or customized that is used to increase, maintain, or improve the functional capabilities of a child with a disability. [00:03:00] Practically speaking, this means that a wide range of tangible supports provided to students with disabilities from pencil grips to sophisticated communication devices are considered AT.

 A key element of AT is that it is related to function rather than any disability category. And as such, addresses the entire range of what students may need to succeed in school and beyond. IDEA section 300. [00:03:30] 6 defines an AT service as any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device. Of note in this definition is the phrase assists a child. While the examples may appear to be things that are done for a child, professionals include the student and their family in all areas of AT decision making and use. The ultimate goal is to prepare the student for independence [00:04:00] after the K-12 system.

 The context for AT consideration is most clearly established in section 300.105 of the final regulations of IDEA, which states that A, each public agency must ensure that assistive technology devices or assistive technology services or both are made available to a child with a disability if required as part of the student's one, special education, two related services [00:04:30] or three, supplementary aids and services. Basically, this means that if the student requires AT devices and services to participate or benefit from any of these three areas, what is needed must be provided at no cost to the student's family since the AT is a critical part of the student's free, appropriate public education. The IEP team is also charged with determining whether the student needs AT devices and services at home and in other locations.

 [00:05:00] IEP implications. To ensure that a student's possible need for AT devices and services are addressed, IDEA requires that such needs are considered during the development or revision of every student's IEP. After goals have been established, the IEP team asks themselves if the student requires AT devices and services to make progress towards IEP goals and in the general curriculum. [00:05:30] There are three outcomes of consideration. The student can progress without assistive technology. The student requires assistive technology and the IEP states what is needed or more information is needed to make a decision which may lead to an evaluation. IEP teams should also consider if AT is needed during assessments and other tasks as a documented accommodation.

 Accessibility of instructional [00:06:00] technology. Instructional technology, or IT is designed to facilitate successful teaching and learning practices. Commonly used in general education subject areas, including literacy and mathematics, IT is most impactful when teachers combined it with best practices for differentiating and personalizing learning experiences for students with and without disabilities. An example is mind mapping software. Mind mapping [00:06:30] enables students to create visual representations for vocabulary, concepts, and processes by using non-linear graphical layouts. Such IT has proven valuable for many students, particularly those with learning disabilities and autism. In addition to using IT with evidence-based instructional practices, digital accessibility is essential to ensure that students with disabilities are independent, can participate and make [00:07:00] progress in general education curricula. When digital materials are accessible, students with disabilities can use them with the same ease and effectiveness as students without disabilities. This is because accessible technology follows four principles outlined in a model known as POUR.

 They are perceivable, operable, understandable, and robust. Perceivable means that students can use multiple senses to access the information, whether [00:07:30] through sight, sound, or tactile means. Examples include digital books that students can customize by adjusting the display, activating text to speech, or converting to digital braille. Operable means the material provides options for students to interact with the material, whether through keyboard, screen gestures, or voice control. Understandable means the material is presented in a logical and consistent manner. In language the [00:08:00] student can understand and with scaffolds for learning. Robust means the material works across different devices and web browsers and has been tested for accessibility. The POUR model helps guide practitioners and teams in selecting accessible IT.

 In summary for part one, matching technology with the needs of students with disabilities happens across all environments. According to data collected by the National Center [00:08:30] on Education Statistics, most students with disabilities spend the majority of their time in general education settings. This points to the need for using both IT and AT in ways that are optimized for learner variability. The right to assistive technology, accessible educational materials and other supports when needed is an inherent component of the obligation of state and local agencies to ensure that students with disabilities receive a free and appropriate public education. AT and IT [00:09:00] are critical tools in the arsenal of special and general education teachers. Using resources from the AEM center, Cites, IRIS, Ceedar and other organizations funded by OSEP and the US Department of Education can help IEP teams and individuals identify and select technology options that can support student needs in a range of areas.

 Part two, frameworks for implementing AT and IT. [00:09:30] In part two, we briefly discussed two applied frameworks to guide practitioners and families in their selection and implementation of AT and IT. They are the SETT framework and Universal Design for Learning. The SETT framework. When faced with determining devices, services, and other supports needed by a student, many teams across the country and world have found the SETT framework to be helpful. SETT is an acronym for Student, [00:10:00] Environments, Tasks and Tools. The S in SETT stands for student. This means centering the individual as the ongoing focus of decision making regarding technology adoption and implementation. The E in SETT stands for environments. The key here is for the team to consider all of the settings where the student interacts throughout the day to determine needed supports. The first T in SETT stands for tasks. Within environments [00:10:30] the student encounters, the team should determine the range of tasks and expectations placed on the student.

 This will help illuminate areas of strength and need as well as student preferences. Finally, the second T in SETT stands for tools. After the team considers the students strengths and needs, the environments where they live and learn and the demands of those environments needed tools can be identified including AT and accessible IT. [00:11:00] When combined with a strong foundation in AT and accessible IT, the SETT framework helps students, families, educators, and others work together to identify concerns and consider the tools such as technology, strategies and training that lower barriers to achievement of educational, vocational, and personal goals.

 Universal Design for Learning. We conclude part two with a brief introduction to Universal Design for Learning or UDL. [00:11:30] The Every Student Succeeds Act points to UDL as a scientifically valid framework for guiding educational practice. Research in the learning sciences has revealed that learners vary in what they find motivating, the why of learning, how they take in and process information, the what of learning, and how they are able to respond and demonstrate their learning, the how of learning. Pioneered at CAST UDL is [00:12:00] a framework for designing flexible learning experiences that proactively address this variability. With UDL, this is done by providing learners with options in the form of multiple means of engagement to recruit their interest and drive their motivation for learning, multiple means of representation to make information more accessible and understandable, and multiple means of action and expression to harness creativity and get a more accurate measure of what students truly [00:12:30] know.

 In sum UDL offers teachers and other instructors a thoughtful framework of options they can use to design and deliver effective instruction, provide creativity and measure the impact on learning without total reliance on traditional approaches. The goal of UDL is to help students become expert learners who are in their own way, resourceful and knowledgeable, strategic and goal directed, purposeful and motivated. [00:13:00] When educational environments and activities are designed and delivered according to the principles and practices of UDL, the barriers faced by many students will be anticipated and lowered. Sometimes people make the assumption that implementation of UDL means that students with disabilities will no longer need to use AT however, that is not the case. Even in the most robust UDL environments, some students will require individualized services [00:13:30] including AT to benefit from the opportunities offered by UDL. While a full exploration of UDL is beyond the scope of this video, we encourage viewers to visit CAST and OSEP sponsored resources to learn more.

 In conclusion, students with disabilities benefit when teachers at all levels use assistive and instructional technology in combination with other evidence based and high leverage practices. [00:14:00] Frameworks such as SETT and UDL are highly useful and effective for designing and delivering instruction that meets the needs of a range of students. Thanks for watching, and please continue using resources for the high leverage practices for students with disabilities. And for the top content related to this specific HLP, please visit the AEM Center and Cites websites. This video is dedicated to Dr. Joy Smiley [00:14:30] Zabala, whose passion for advancing the independence, participation, and progress of learners with disabilities affixed an indelible mark on the field of educational technology.