

Introduction

Educators face pressure to take on various roles for education stakeholders in a time where staffing shortages are common and pandemic-related challenges are pervasive.¹ Meanwhile, students' needs continue to change, and districts must take steps towards "developing the holistic student—not just academically—making sure that students are regulated, able to handle themselves socially and emotionally as they're matriculating their way through our schools as well," as described by AASA's, the School Superintendents Association's, 2022 National Superintendent of the Year, Curtis Cain.² To ensure educators feel prepared to deliver quality instruction and support, Mary Lou Fulton Teachers College at Arizona State University created the Next Education Workforce—an initiative that structures educator pathways and develops high-quality educators to more effectively support students and increase educators' job satisfaction and retention.³ In a similar but more comprehensive vein, AASA recently created a Vision of Systemic Redesign, which provides a foundation for redesigning school systems through three core components (i.e., culture; social, emotional, and cognitive growth; resources) to develop future-focused and collaborative environments that meet the needs of all learners.⁴

Understanding what skills and characteristics contribute to being an effective educator is vital for AASA, as the association engages and supports constituents in efforts towards its new vision for public schools and holistic school redesign. To make progress in a holistic redesign of public schools and support superintendents in recruiting and retaining innovative and effective educators, Hanover Research (Hanover) presents this research brief on the profile of a future educator. Specifically, this brief contains three main sections, which focus on technology, economic, and demographic shifts. Within each section, the first part discusses trends and shifts, then presents how these changes affect future educators. The second part of each section, labeled Leadership Support for Future Educators provides insights on how superintendents and other district leaders can support current and future educators as technology, economic, and demographic shifts occur.

Practical Applications

Based on secondary research, Hanover presents the following practical applications for superintendents:



Provide individual and collaborative professional learning opportunities around technology implementation regularly through training sessions, peer observations, and other means to ensure all new and continuing educators develop confidence and competence in implementing educational technology effectively.



Review the district's capacity to increase salaries and create incentives (e.g., retirement benefits, childcare support) to attract highly qualified future educators and retain current and newly hired educators. Investing in partnerships with higher education and grow your own programs are effective strategies for human resource challenges, especially in difficult economic times. Additionally, districts should design research to understand hiring trends and target resources to meet challenges.



Demonstrate commitment to developing a culturally competent workforce by providing consistent, ongoing professional learning with the purpose of developing empathetic, open-minded, confident, and well-prepared students. Superintendents should also ensure their own cultural competency in order to best demonstrate this commitment.

Key Findings



Future educators must be skilled and confident in their ability to use educational technology with a nuanced level of authority. Technology poses several internal barriers (e.g., competence in implementation) and external barriers (e.g., technology availability) when used for education. Still, future educators must overcome these barriers, particularly internal barriers, as self-assessed skill level in using technology and attitudes towards using it affects how much they implement technology and how much students engage in learning activities. Notably, educators must tailor how they use technology and ensure they guide students' use rather than lecturing about content students can simply find for themselves online. Educators must implement technology purposefully and serve as a human connection students may otherwise lack through technology-based learning.



In times of economic instability, educators tend to struggle if economically anxious, implying that future educators must feel financially secure. Economic anxiety poses particular concerns for school districts as educators who feel anxious about their financial situation also tend to indicate lower job satisfaction, miss more days of school, and experience chronic absenteeism more often. Subsequently, these challenges may then result in educator attrition, which often occurs within two years of facing such anxiety and challenges. Potential government support for educator retention may support these concerns, though district-established opportunities (e.g., loan forgiveness, housing incentives, child care) also provide possible solutions supporting educator needs.



Demographic projections predict that school districts will continue to become more diverse, which increases the need for future educators to understand all student identities and for leaders to be open to diversity. Recent demographic trends show that the shrinking enrollment comprises a larger proportion of non-White students, English learners, and students with disabilities than in years past. However, educators continue to be less diverse than the student population. Given this discrepancy, future educators must be understanding of all students and their identities, and leaders must support educators in this development while engaging in equitable hiring practices.



A common theme among future educators, given technology, economic, and demographic shifts, is to have a positive and open mindset. For example, effective educators who can implement educational technology feel confident and have a positive attitude towards their use of technology in the classroom. Regarding the economy, educators with comparatively less economic stress demonstrate more consistent attendance at school, more job satisfaction, and less attrition than those who internalize financial stresses. Furthermore, with increasingly diverse student demographics, educators must have an open mindset and work to develop open mindsets in their students. Open mindsets lead to a deeper understanding of culture and diversity and is critical for student success as it supports students in making connections and feeling empowered.



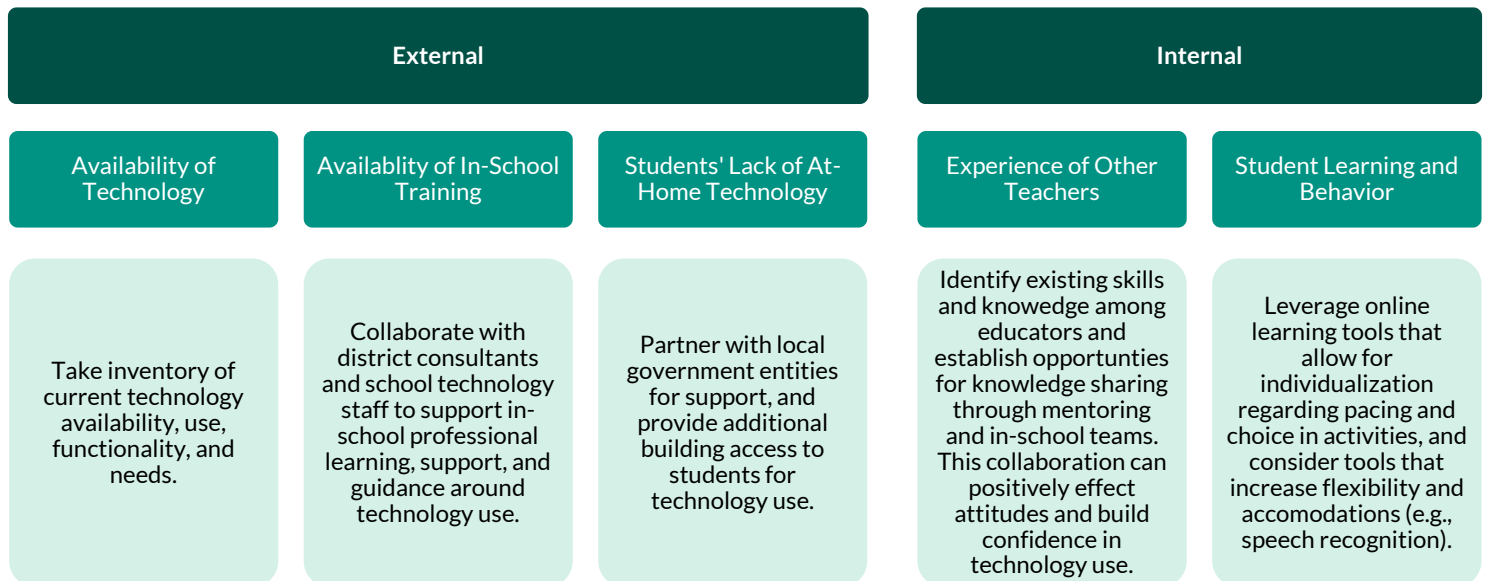
Leaders can help reduce the technology, economic, and demographic challenges faced by current educators for future educators by supporting educator pipelines and ongoing professional learning. Educators appear to benefit from collaborative learning experiences as they develop new technology skills, which is something leaders can facilitate through professional learning opportunities. Additionally, leaders can ease financial burdens through incentives to recruit and retain future educators and help reduce student-teacher diversity gaps by establishing partnerships (e.g., with higher education institutions and grow-your-own programs). Well designed programs will welcome diverse educators into their districts.

Future Educators and Technology Shifts

Recent trends and predicted future shifts in technology demonstrate the importance of technology for academic and social needs and continuing concerns over the digital divide.. Specifically, about 90 percent of respondents to an April 2020 survey indicated that the internet is a positive tool for them personally, and 87 percent agree it supports them during COVID-19; still, 21 percent responded that their child will be unable to complete school assignments due to insufficient internet access.⁵ Months later, Gallup Poll survey findings reveal educators’ concerns regarding the virus and that preference for remote work increased throughout the spring and summer of 2020.⁶ These stakeholder concerns and preferences come at a time when educators need to implement technology-based teaching tools for remote learning and when schools have “already evolved into a hotbed of technological advances” with more to come (e.g., biometrics as measures for social-emotional diagnostics, augmented reality glasses as tools for engaging instruction, multi-touch surfaces for collaborative activities).⁷

Given the many tools and approaches for using educational technology and the heightened use of technology for personal and educational use following the COVID-19 outbreak, **a future educator must be able to overcome the external and internal challenges that emerge from the growing reliance on technology.** A 2021 study from Ireland – which included survey results from 38 primary and secondary educators to explore technology use and the impact of COVID-19 on technology use – separates barriers into internal (e.g., beliefs, confidence) and external (e.g., physical resources) categories and provides guidance on overcoming such roadblocks.⁸ The following figure details these barriers and resulting recommendations, which provide insight into how to overcome challenges experienced globally.

Internal and External Barriers to Technology Use



Source: *Irish Educational Studies*⁹

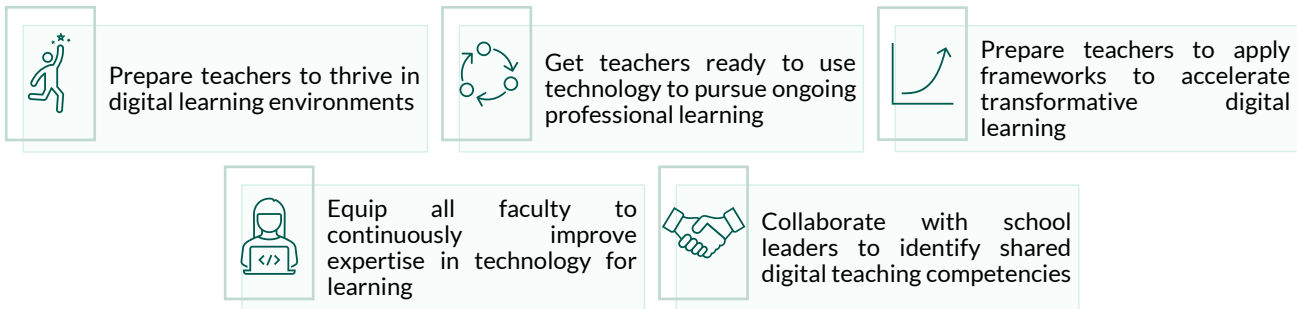
As referenced in the figure above, internal factors and teachers’ self-efficacy around technology use can erect barriers to effective instruction.¹⁰ Therefore, **a future educator must feel competent in their ability to effectively implement educational technology.** Notably, this element of a future educator’s profile focuses on how educators perceive themselves and assess their technology skills. In a 2021 study published in *Computers in Human Behavior*, which includes perceptions and experiences of 90 teachers and student teachers with practical experience, researchers analyze the

relationship between self-assessment of technology skills and the initiation of learning activities.¹¹ The analysis shows that four phases of instruction (e.g., plan, implement, evaluate, share) require skills for educators to implement technology effectively and there exists a positive relationship between self-assessed skill level in instructional phases and the initiation of student learning activities. Further evidence suggests educators' attitudes towards educational technology, as opposed to advanced self-assessed skills, may result in educators using technology more often, but student learning activities then are less advanced (e.g., one-way knowledge sharing, teacher-centered instruction).¹²

Similarly, a large 2021 study of 1,335 primary and secondary educators in Florida explores technology support, educators' confidence in and beliefs about technology use, and perceived skills in using instructional and application software. The analysis shows that as educators' perceived technology skills, confidence, and comfort using certain instructional or application software increases, their use of such software increases.¹³ Notably, this finding aligns with literature discussing how "perceived skills or technology competency directly and positively influenced teachers' use of technology."¹⁴ As such, a future educator must develop positive perceptions about their ability to use educational technology, and educators may benefit from professional development on current and future technologies and associated benefits.¹⁵

The phenomenon that educators' technology skills and perceptions of these skills affect their technology use, and educator insights conveying the ineffectiveness of educator preparation and college programs preparing them for technology use, caused the U.S. Department of Education and the International Society for Technology in Education (ISTE) to take action. Specifically, these institutions asked preparation programs to sign a pledge demonstrating their commitment to developing future educators' education technology skills.¹⁶ Through this pledge, educator preparation programs agree to the five goals shown below.

Preparation Program Commitments to Support Future Educators with Technology



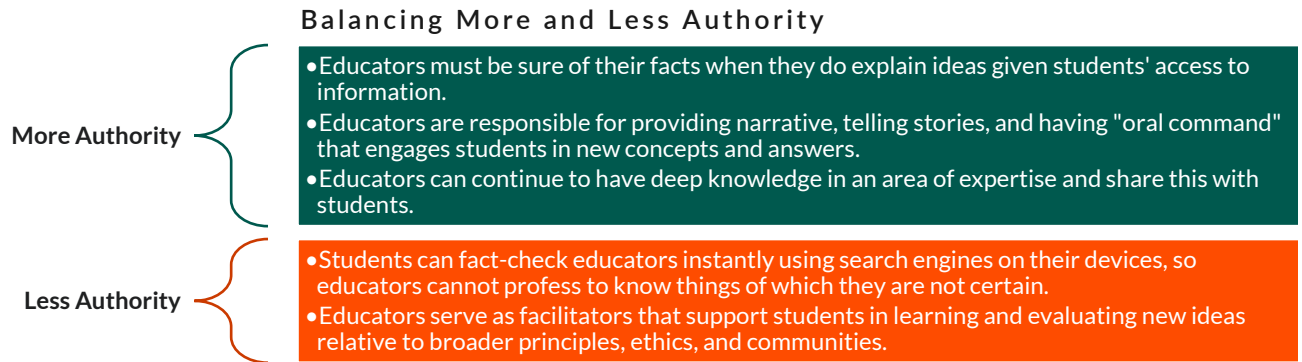
Source: EdWeek Market Brief¹⁷

Additionally, a **future educator responding to technology shifts must serve as a facilitator providing a human connection rather than lecturing.** Because students now have access to information and learning opportunities through technology, students can more deeply engage in and take more ownership of their education.¹⁸ Meanwhile, a future educator serves as a motivator and facilitator that supports students' learning through the following actions:¹⁹

- Understanding how to help students access online information;
- Engaging in simulations of real-world events;
- Using technology to document students' world;
- Using digital tools to help students create spaces to experiment, iterate, and take intellectual risks;
- Helping students make connections across subject areas and decide on the best tools for collecting and showcasing learning; and

- Advising students on how to build an online learning portfolio to demonstrate their learning progression.

The role of a future educator as a “guide on the side” rather than a “sage on the stage,” requires educators to demonstrate more and less authority than they previously did.²⁰ The following figure illustrates how future educators must balance their role as authorities.



Source: Schools Week²¹

Leadership Support for Future Educators

To ensure districts prepare for and adequately support future educators as educational technology expands, **superintendents and other leaders must ensure future educators have access to the tools, professional learning, and collaboration experiences** that build confidence, develop technology capacities, and share knowledge among peers.²² Specific competencies include:²³

- Selecting appropriate technologies and resources;
- Evaluating appropriate technologies and resources;
- Using appropriate technologies and resources; and
- Understanding privacy and security concerns within appropriate technologies and resources.

Additionally, a future educator should be able to collaborate with colleagues to share experiences and learn about technology implementation and integration. For pre-service educators specifically, collaboration with colleagues creates a “low threatening learning environment” to share perspectives and skills, reflect on personal and peer experiences, and reduce the anxiety and failure avoidance that often occurs during technology-incorporated learning.²⁴ Such collaboration can occur online too, and multiple online interactions may still support the development of future educators through various collaborative activities (e.g., reviewing others’ practices, providing feedback, planning curriculum materials, facilitating conversations between each educator’s students).²⁵

Future Educators and Economic Shifts

Districts faced challenges with hiring qualified educators and experienced a staffing shortage following the Great Recession, which occurred from 2007 to 2009 followed by an especially slow recovery.²⁶ A subsequent 2013 report from the Learning Policy Institute (LPI) indicates that factors including fewer teacher preparation enrollments, ineffective student-teacher ratios, higher student enrollment, and higher teacher attrition impacted shortages. Other trends that occurred included educators feeling unsupported in the workplace, high levels of attrition among schools in high-poverty areas and with high proportions of minority students, and trends with educators of color leaving most frequently.²⁷ Although the United States is not currently experiencing a recession, the World Bank and OECD project comparatively low growth in 2022 and 2023 compared to 2021, and

schools and districts demonstrate staffing shortages.²⁸ As districts think about recruiting and retaining future educators, economic stresses and outlook may influence the *who* and *how* of hiring.





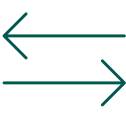




A future educator who remains in their position may benefit from a lack of financial stress and a positive attitude about their job. When educators feel stressed about money and their financial situation—a potential ramification given the economic forecast noted above—they indicate less job satisfaction, miss more days of school as single days or as chronic absenteeism, and have a greater likelihood of attrition.²⁹ This connection between economic anxiety and the educator workforce is the focus of a 2019 study published in *AERA Open*. In this study, researchers used survey data from 2,266 K-12 educators in a large urban district to collect information on economic anxiety, educator attitudes, and demographics. The analysis reveals these urban educators have greater economic anxiety than the national average adult, with younger educators demonstrating higher economic anxiety. Additionally, results corroborate the link between economic anxiety and educator retention, as “economically anxious teachers tend to have more negative attitudes about their jobs, have worse attendance, and are 50% more likely to depart the district within 2 years after the survey.”³⁰

According to one source, economic pressures may require schools and districts to make staff cuts. School finance researcher and policy analyst Michael Griffith’s model projects **potential cuts would likely target less tenured staff the most**. Specifically, Griffith anticipates districts will conduct educator reduction efforts due to a “COVID-19 recession” based on seniority.³¹ However, other forecasts and research reveal that COVID-19-era job losses were heavily impacted by a lack of hiring rather than layoffs. Layoffs, retirement, and dissatisfaction-related departures declined in 2020; and hiring freezes meant that staff did not grow and departing employees were not replaced.³² Looking ahead, the ability to increase hiring may depend on student enrollment increasing (note: student enrollment projections predict a decrease in enrollment) and the passage of the Save Education Jobs Act.³³ The Save Education Jobs Act would allow state education agencies to “award grants to state educational agencies and, through them, subgrants to local educational agencies (LEAs) to retain and create education jobs.”³⁴ This act, introduced to the House of Representatives in January 2021, would provide funding through the 2030 fiscal year, allowing districts to continue to pay current staff, provide professional development, increase salaries, develop leadership roles, and hire future educators.³⁵ Therefore, **districts may be competing for future educators if this bill passes** after a gap in hiring and changes in the supply of qualified educators searching for positions.³⁶

Leadership Support for Future Educators

Superintendents and district leaders can support current and future educators during economic shifts by increasing salaries, professional development opportunities, and employee satisfaction. With a challenging economic climate and the climate’s negative impact on educators, leaders should reevaluate budgets and provide attractive salaries so schools can recruit and retain high-quality educators, compete with employers hiring workers with similar experiences at higher salaries, and allow educators to “focus exclusively on their classrooms instead of working additional jobs.”³⁷ Strategies for improving salaries, recommended by LPI following post-Great Recession research, include 1) ensuring competitive and equitable packages in high-needs schools so students with the greatest needs have access to high-quality teachers, and 2) establishing financial incentives to soften financial burdens (e.g., child care support, housing support). Further, the Schools and Staffing Survey results analyzed by LPI show that among participants who left the teaching profession, the following factors would be very or extremely important in whether they would return as educators. Factors appear from left to right in the order of most to least important.³⁸

Factors Influencing Decisions to Return to Teaching

								
Ability to maintain teaching retirement benefits	An increase in salary	Smaller class sizes or smaller student load	Easier and less costly renewal of certification	State certification reciprocity	Availability of part-time teaching positions	Availability of suitable child care options	Forgiveness of student loans	Housing incentives

Source: Learning Policy Institute³⁹

Additionally, leaders may improve professional development offerings and working conditions to recruit and retain high-quality future educators during the forecasted economic downturn. Effective professional development opportunities provide the support that educators need to feel supported and advance professionalization. However, these opportunities are less accessible for educators in high-poverty schools, which also experience higher attrition.⁴⁰ Strategies for improved training opportunities and working conditions that may support leaders in hiring high-quality future educators include those shown below.

Efforts for Training and Working Conditions to Employ High-Quality Educators

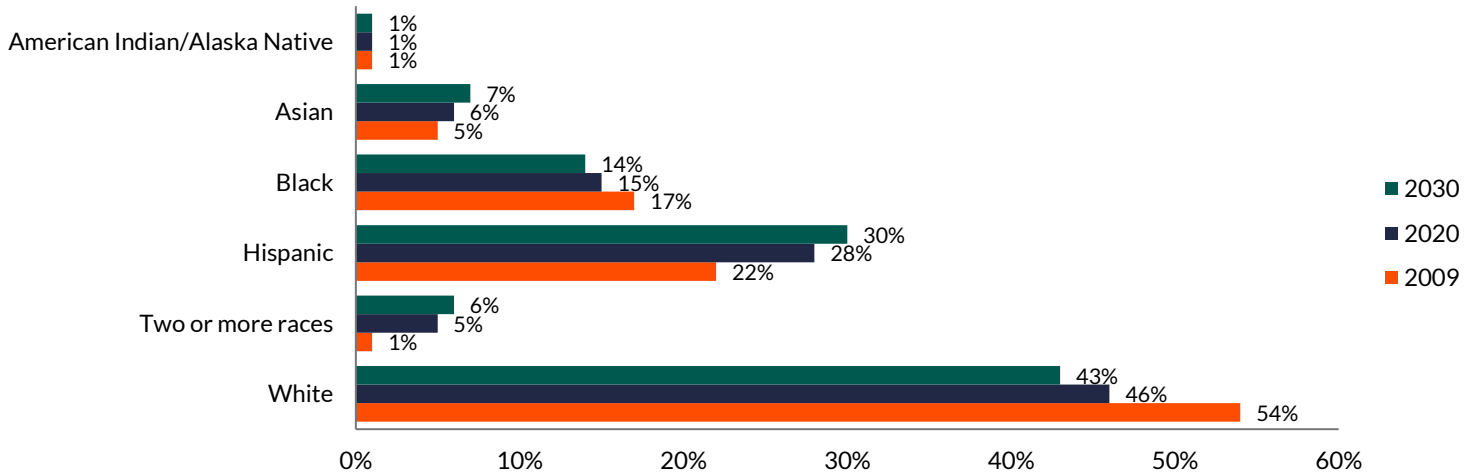
TRAINING AND DEVELOPMENT EFFORTS	WORKING CONDITION EFFORTS
<ul style="list-style-type: none"> • Offer forgivable loans and service scholarships to attract and retain teachers to high-need fields and locations. • Create career pathways and “Grow Your Own” programs to prepare committed individuals from urban and rural school districts. • Establish teacher residency models for hard-to-staff districts to recruit and retain talented and diverse candidates in high-need schools, while better preparing them for the challenges they will face. 	<ul style="list-style-type: none"> • Develop strong, universally available mentoring and induction programs to increase retention and help slow the revolving door of beginning teacher turnover. • Create productive school environments, including supportive working conditions, administrative supports, and time for teachers’ collaborative planning and professional development—all of which help attract and keep teachers in schools. • Strengthen principal training programs to develop principals and district leaders who can create productive teaching and learning environments that have a major impact on a teacher’s decisions to stay or leave the classroom.

Source: Learning Policy Institute⁴¹

Future Educators and Demographic Shifts

According to the National Center for Education Statistics (NCES), public school enrollment increased between 2009 and 2019 but decreased by about 1.4 million students from 2019 to 2020 to a recent tally of 49.4 million Prekindergarten to Grade 12 students. Enrollment projections show that enrollment will continue to decrease in the coming decade due to decreases in the projected school-age population and reach about 47.3 million Prekindergarten through Grade 12 students in 2030.⁴² Within this population, student group demographics continue to shift in terms of race and ethnicity, language status, and disability status. The following figure presents changes and projections according to students’ racial and ethnic identity.

Trends and Projections Regarding Student Demographics



Source: National Center for Education Statistics⁴³

Additionally, public school enrollment of English learners and students with disabilities increased in the past decade with English learners comprising 10.4 percent of students as of 2019 and students with disabilities comprising 15 percent of students.⁴⁴ English learner populations are highest in urban areas and lowest in rural areas, and larger in elementary schools than in secondary schools. Notably, Spanish Castilian is the most common home language, with 75.7 percent of English learners speaking this language at home. The next most common home languages are Arabic (2.6 percent) and English (2.1 percent; note: these students come from multi-lingual households and countries where they spoke English at home while learning another language as a child).⁴⁵ Regarding students with disabilities, enrollment demonstrates an upward trend since a drop during the COVID-19 pandemic, and racially, American Indian/Alaska Native and Black students comprise the largest percentages of students receiving services under the Individuals with Disabilities Education Act. The three most common disability categories include specific learning disability (i.e., a disability in a basic psychological process related to language and occurring through various abilities such as reading, writing, doing math, speaking, or thinking), speech or language impairment, and other health impairment (i.e., limited alertness or strength due to health problems such as epilepsy, leukemia, diabetes, or a heart condition).⁴⁶

Among educators, the past 30 years of demographic data show student and educator demographics follow similar trends (i.e., the population of White educators decreased, the populations of Hispanic and Asian educators increased, the population of Black educators remained very similar). However, **educators remain far less diverse than the students they teach.** Specifically, the educator population is far more White and far less Hispanic compared to the student population.⁴⁷ Beyond race, educator qualifications demonstrate an upward trend with more educators having a postbaccalaureate degree and teaching certificate than in years past. As of 2018, fewer educators are new to the profession or veterans in the profession (i.e., less than three or more than 20 years of experience); meanwhile, the most common bracket for educators is having 10 to 20 years of experience.⁴⁸

Knowing these trends in demographics and the difference between student and educator identities, **future educators must be understanding of students' needs and aware of the issues around and the importance of diversity in the classroom.** For example, future educators should understand how to engage in culturally responsive teaching to best meet diverse populations' needs. This cultural responsiveness "empowers students intellectually, socially, emotionally, and politically" by stimulating learning connections and highlighting one's culture in the curriculum.⁴⁹ Future educators

who understand students' cultures and practice culturally responsive teaching and are aware of the history and details of a group reduce students' self-doubt, inspire learning, and encourage students to build on what they already know from their background.⁵⁰

Similarly, an OECD working paper describes how future educators must meet increasing expectations by having the knowledge and skills to engage with diversity challenges, reflect on other identities, demonstrate empathy, and other practices.⁵¹ Research indicates educators who enter the workforce following effective diversity training have the following attributes:⁵²

- See diversity as an asset-based mindset;
- Engage in cultural self-reflection;
- Link theory and practice;
- Integrate diversity into content and skills; and
- Leverage innovation and technology.

Leadership Support for Future Educators

From the leadership perspective, leaders must engage in equitable hiring practices and provide guidance around teaching diverse students as demographics continue to evolve. According to a 2021 working paper from the Annenberg Institute at Brown University (n=59,157 principal observations, 662,997 educator observations across 17 years), White principals are less likely to hire educators of color as the proportion of White students increases.⁵³ Therefore school and district leaders must consider strategies to support a more diverse educator candidate pool and workforce. For the gap between Latinx students and educators specifically, a senior policy analyst at New America recommends the following strategies:⁵⁴

- **Invest in higher education partnerships** to support Latinx students in attending four-year institutions rather than strictly community colleges;
- **Develop grow-your-own programs** to support educators in teaching in their local communities that may comprise student identities similar to their own;
- **Support students financially** through loan forgiveness or other financial incentives as a recruitment strategy;
- **Collect more data** around rates of retention, completion, and entry into teaching to understand what strategies and programs are most effective for supporting Latinx educators; and
- **Identify testing barriers** to support aspiring educators as they prepare for and take required exams.

Furthermore, leaders can encourage numerous strategies for in-seat educators as they continue to develop as educators, they will support future cohorts of students. Examples of strategies and reasons why such efforts towards an inclusive workforce and environment are important include those below.⁵⁵

Strategies and Explanations for Supporting Cultures and Diversity in the Classroom

STRATEGIES	OUTCOMES
<ul style="list-style-type: none"> • Get to know your students • Maintain consistent communication • Acknowledge and respect every student • Practice cultural sensitivity • Incorporate diversity in the lesson plan • Give students freedom and flexibility 	<ul style="list-style-type: none"> • Students become more empathetic • Students gain a better understanding of lessons • Students become more open-minded • Students feel more confident and safe • Students are better prepared for a diverse workplace

Source: Drexel University School of Education⁵⁶

Endnotes

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