

FINDING YOUR WORKFORCE:

LINKING COLLEGE COMPLETION WITH U.S. WORKFORCE
NEEDS IN SCIENCE, TECHNOLOGY, ENGINEERING,
THE ARTS, AND MATHEMATICS (STEAM)



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Excelencia in Education leads a national network of results-oriented educators and policymakers transforming higher education to tap the talents of the Latino community and address the U.S. economy's needs for a highly educated workforce and engaged civic leaders. With this network, *Excelencia* ensures access to excellence by promoting student achievement, informing educational policies, and advancing evidence-based practices to more intentionally serve Latino, and all, students.



CSUN's Global Hispanic-Serving Institution (HSI) Equity Innovation Hub: CSUN's Global HSI Equity Innovation Hub seeks to activate the brilliance of our students and prepare them as the innovators and creators of the future. We're not just nurturing the next generation of leaders and innovators; we're transforming entire family trees. We believe in authentically serving our students and community, disrupting inter-generational inequity, and, most importantly—in a more diverse and inclusive future workforce in STEAM, where everyone belongs. To learn more, visit www.hsiequityinnovationhub.org

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EXECUTIVE SUMMARY

Latino talent is vital to our workforce—particularly in science, technology, engineering, arts, and mathematics (STEAM), where innovation and creativity converge to drive economic growth. Emerging technologies, including artificial intelligence (AI), are reshaping industries and changing the skills needed for workforce success. Professionals who can combine technical expertise with design thinking, collaboration, and problem-solving will be in increasing demand in STEAM occupations. However, Latinos remain underrepresented in these high-wage, high-demand fields. Ensuring the nation’s competitiveness requires that institutions and employers work together to identify, prepare, and connect Latino talent to STEAM careers.

The following insights highlight Latino participation in the STEAM education-to-workforce pipeline and actionable strategies for institutions and employers to close persistent gaps.

LATINOS ARE IN THE STEAM TALENT PIPELINE

- **Latinos are earning nearly one-third of STEAM degrees.** In 2023, Latinos earned 31 percent of all STEAM degrees, most at the undergraduate level.
- **A concentrated set of institutions drives Latino STEAM degree completion.** Overall, 31 percent of all Latinos who earned a STEAM degree graduated from one of the top 25 institutions graduating Latinos in STEAM across all credential levels.
- **HSIs award the most STEAM credentials to Latinos.** Hispanic-Serving Institutions (HSIs) awarded the majority of STEAM credentials earned by Latino students. Among the top 25 institutions awarding STEAM degrees to Latinos, 24 were HSIs, and Latino representation across these institutions was 45 percent.
- **Intentional institutional strategies strengthen Latino STEAM outcomes.** Seal of *Excelencia* certified institutions and Intentionally Thriving Institutions (ITIs), both certified by *Excelencia* in Education, lead national efforts to align leadership, data, and practice to ensure Latino post-completion success. Of the top 25 institutions, 7 are Seal-certified, and 3 are ITIs, highlighting the impact of intentional, evidence-based strategies on Latino STEAM attainment.

LATINOS ARE THE FUTURE STEAM WORKFORCE

- **STEM and STEAM occupations are growing and offer higher wages.** STEM and STEAM occupations are growing twice as fast as non-STEM jobs and offer median wages more than double those of other fields.
- **Latinos will drive workforce growth yet remain underrepresented in STEM.** Latinos are projected to represent 91 percent of new U.S. workers by 2031, yet are only 15 percent of the STEM workforce, despite making up 18 percent of all workers.
- **STEAM skills are critical to innovation and adaptability.** Integrating the arts into technical education enhances creativity, communication, and adaptability—skills that power innovation across disciplines and industries.

WHAT INSTITUTIONS CAN DO

- **Include the arts in STEM curricula.** Integrate creativity and design thinking into technical education to strengthen critical thinking, collaboration, and innovation.
- **Assess Latino participation in STEM and STEAM programs.** Identify gaps in enrollment and access and expand opportunities that increase exposure to STEAM pathways.



- **Expand post-completion STEAM support.** Provide mentorship, job placement, and professional development that emphasize interdisciplinary application and creativity.
- **Evaluate and deepen industry partnerships.** Map current collaborations and identify new opportunities to connect Latino graduates to STEAM fields.
- **Redefine post-completion success metrics.** Track how Latino alumni apply their education in the workforce to refine programs and improve career readiness.
- **Collaborate to strengthen the STEAM talent pipeline.** Partner across institutions—such as through the Global HSI Equity Innovation Hub—to align data, share practices, and connect with employers to scale impact.

WHAT EMPLOYERS CAN DO

- **Invest in interdisciplinary Latino talent ecosystems.** Expand STEAM pathways by funding paid internships and research opportunities, supporting scholarships, and hiring local Latino graduates.

- **Align workforce and academic goals.** Collaborate with institutions to align hiring needs and curricula, ensuring recruitment and training reflect Latino students' experiences and the realities of an interdisciplinary workforce.
- **Collaborate on data and insight sharing.** Partner with HSIs and ITIs to track post-completion outcomes, forecast industry needs, and identify where STEAM skills are most valuable.
- **Engage faculty as innovation partners.** Adapt curricula, co-develop research, offer site tours, and create project-based internships that mirror real industry challenges.
- **Connect professionals with future workforce.** Engage Latino professionals as mentors to support current students' transitions into STEAM careers.

When institutions and employers intentionally engage to prepare and source Latino STEAM talent, they create sustainable ecosystems that fuel innovation, expand opportunity, and ensure the nation's economic and civic future.

INTRODUCTION

As artificial intelligence (AI) accelerates changes across industries, the future of work will depend not only on technological advancement but also on the human capabilities that guide, interpret, and apply it. While AI can automate tasks and analyze vast amounts of data, it cannot replace human judgment, creativity, ethical reasoning, or collaboration. These competencies—central to innovation and economic growth—are intentionally cultivated through STEAM education, which integrates science, technology, engineering, the arts, and mathematics. Preparing students for an AI-enabled economy requires more than technical training alone; it requires interdisciplinary education that equips graduates to adapt, communicate, and lead as work evolves.

At the same time, the future of the nation's workforce—and its capacity to remain competitive—will increasingly depend on Latinos. From more than two decades of engaging with institutions advancing Latino enrollment, completion, and post-completion success, *Excelencia* in Education has learned that intentional strategies to recruit, educate, and equip Latino students not only improve individual outcomes but also strengthen the nation's workforce by expanding access to the skills required in today's evolving labor market. Employers now have a unique opportunity to complement these institutional efforts by actively engaging Latino students in experiences that strengthen STEAM readiness and support long-term career success beyond graduation.

To seize this moment and increase the number of trained and educated Latinos in the STEAM workforce, employers and institutions can leverage data on students' educational trajectories to identify where Latino talent is located. Consider the following facts:

ENROLLMENT: In 2023, 3.7 million Latinos were enrolled in college and represented 23 percent of all undergraduate students (*Excelencia* in Education, 2023a). Further, Latinos' enrollment in college is projected to increase over the next decade as they represent a higher proportion of the college-age population. Combining this demographic growth with the knowledge that Latinos represent a post-traditional student majority—more likely to prioritize access, location, and cost in their choice of institution—has fueled the growth of a critical group of institutions, Hispanic-Serving Institutions (HSIs).¹ Latino undergraduates are highly concentrated at HSIs—64

percent of all Latino undergraduates and 33 percent of all undergraduates are enrolled at HSIs, and the numbers of HSIs are also projected to grow with Latinos' college enrollment.

COMPLETION: Nearly one-third (29%) of Latinos in the workforce (25 years and older) have an associate's degree or higher (U.S. Census Bureau, 2023). In 2023, Latinos represented 31 percent of all STEAM degree recipients. Across all STEAM fields, Latino representation declines substantially from the undergraduate level to advanced degrees. Latinos are strongly represented at the certificate and associate levels; their share decreases sharply at the bachelor's, and even more so at the master's and doctoral levels, compared to other racial and ethnic groups. Overall, these trends reveal a consistent pipeline gap, strong Latino participation in early postsecondary credentials, but a steep decline in advanced degree attainment across all STEAM disciplines (see Table 1). While Latino students represented more than one-quarter at the certificate (26%) and associate (28%) levels, representation drops at the bachelor's level (16%) and continues to decline at the master's (8%) and doctoral (5%) levels. This gap presents a clear opportunity for institutions and employers to intervene earlier and support students' progression into higher-level STEAM fields.

However, a high concentration of Latinos who earned an educational credential in STEAM did so at an HSI. In 2023-24, HSIs awarded the majority of STEAM degrees to Latinos. Moreover, significantly increasing the number of Latino students attaining college degrees requires that institutions go beyond enrollment to intentionally serve Latino, and all,

¹ The classification of Hispanic-Serving Institutions (HSIs) was formally recognized in federal legislation for capacity building support to improve the access and quality of education for Latino and other low-income students. HSIs are defined as accredited, degree-granting public or private nonprofit institutions of higher education with 25 percent or more total undergraduate Hispanic full-time equivalent (FTE).

Table 1. Latino Representation Across Degree Level by Field (2023)

Field	Certificate	Associate	Bachelor's	Master's	Doctoral
Science	20%	36%	16%	11%	7%
Technology	19%	19%	13%	5%	3%
Engineering	21%	19%	14%	7%	4%
Arts	29%	27%	17%	10%	6%
Math	11%	34%	10%	5%	3%
STEAM Overall	26%	28%	16%	8%	5%

Source: *Excelencia in Education* analysis using U.S. Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), 2023 Fall Enrollment, Completion, and Institutional Characteristics Survey

students. Seal of *Excelencia* certified institutions, most of which are HSIs, are setting the pace for institutional transformation and are among the top institutions graduating Latino students. Further, *Excelencia* recognizes a subset of institutions as Intentionally Thriving Institutions (ITIs).² These institutions have demonstrated commitment to Latino post-completion success through their data, practices, and leadership.

POST-COMPLETION: Post-completion success refers to completers' long-term outcomes (e.g., civic, educational, well-being, and economic) within an institutionally defined context and measure. Institutions designated by *Excelencia* as Intentionally Thriving Institutions (ITIs) demonstrate a sustained and evidence-based commitment to Latino, and all, student success. There are eight ITIs that represent less than 1 percent of colleges and universities, yet enroll and graduate 4 percent of all Latino students in the U.S. They exemplify the full alignment of data, practice, and leadership to serve students with intentionality and track progress post-completion toward educational and economic success. Some of the ways in which ITIs are supporting post-completion success are: providing financial support and professional development opportunities in STEAM, connecting directly with employers, training future STEAM educators, and leveraging technology to serve all students.

WORKFORCE: Latinos are the future of the American workforce. By 2031, they are projected to represent 91 percent of new U.S. workers and one in five workers nationwide (*Excelencia in Education*, 2024). Yet, they remain underrepresented in STEM³ fields (U.S. Census Bureau, 2022)—the very areas driving economic growth and innovation

(U.S. Bureau of Labor Statistics, 2024). STEM occupations are expanding faster and pay higher wages than non-STEM roles, and most of the fastest-growing entry-level STEM jobs require at least a bachelor's degree (U.S. Bureau of Labor Statistics, 2024a). To ensure the nation's global competitiveness, investing in Latino participation and success in STEM pathways is essential.

At the same time, the nature of work is evolving due in large part to the rise of AI. The most in-demand skills today—critical and analytical thinking, adaptability, interpersonal skills, and reading and writing—extend beyond technical expertise (U.S. Bureau of Labor Statistics, 2024). Expanding STEM to STEAM, which integrates the arts and creativity into technical education, is key to preparing a workforce that can innovate across disciplines and solve complex problems. STEAM education strengthens students' ability to think critically and communicate effectively: skills that will allow Latino students not only to enter but to lead in the industries shaping our future economy.

These efforts are indicators to pinpoint institutions that are tapping Latino talent and preparing them to enter the workforce. *Excelencia* identified the top 25 institutions where Latinos earned a credential across five award levels (i.e., certificate, associate's, baccalaureate, master's, and doctoral) in STEAM. The top 25 institutions serve as prime locations for sourcing and recruiting Latino talent. Highlighting these top 25 institutions, especially Intentionally Thriving Institutions (ITIs), creates an opportunity for institutions and STEAM employers to make intentional connections and strengthen efforts to develop and source Latino talent. Together, they can build strategic partnerships to facilitate the development of Latino talent into the current and future STEAM workforce.

² Eight institutions from the 2019 inaugural cohort have been recertified twice as Seal-certified institutions, and are now Intentionally Thriving Institutions (ITIs).

³ *Excelencia in Education* only uses publicly available data. Since publicly available labor market data only track STEM and not STEAM occupations, we are only able to speak to the STEM workforce in this particular section.

THE FUTURE STEAM WORKFORCE

At its foundation, STEAM education integrates creativity, design, and innovation, which is often drawn from the arts, humanities, and design thinking into traditional STEM disciplines (Buczynski, 2012). This approach encourages more holistic problem-solving and broadens participation by making science and technology both relevant and engaging. In today’s rapidly evolving and complex world, the future workforce must be equipped with the knowledge and skills to solve problems, interpret information, and apply evidence-based decision-making (U.S. Department of Education, 2024). Enhancing such skills is vital for preparing the next generation of innovators, researchers, and community leaders.

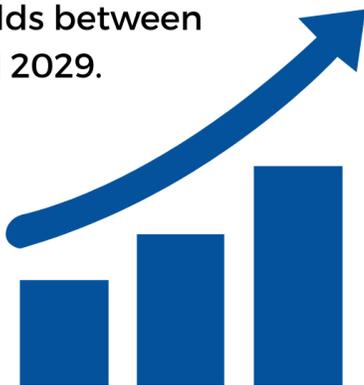
STEAM education develops the competencies most valued in today’s workforce: critical and analytical thinking, mathematical reasoning, adaptability, reading and writing, and creative expression (U.S. Bureau of Labor Statistics, 2024a). These are among the top skills required for the fastest-growing occupations in 2024, according to the U.S. Bureau of Labor Statistics (U.S. Bureau of Labor Statistics, 2024a). By integrating technical expertise with creative problem-solving, STEAM prepares students to thrive in innovation-driven industries such as biotechnology, media, gaming, and artificial intelligence (AI). These fields increasingly seek professionals who can merge data, design, and storytelling to generate new ideas and drive sustainable growth.

As artificial intelligence becomes embedded across industries, the value of STEAM competencies is increasing. While AI can automate routine tasks, it relies on human expertise to define problems, interpret outputs, apply ethical judgment,

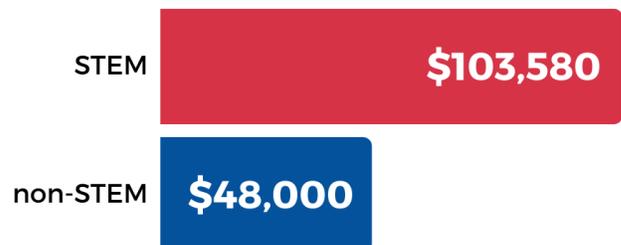
and collaborate across teams. Workers with interdisciplinary STEAM training are better positioned to supervise, adapt, and deploy new technologies rather than be confined to narrowly defined, task-based roles.

Further, national labor market data demonstrate that STEM and STEAM occupations not only grow faster but also offer higher wages than non-STEM roles (U.S. Bureau of Labor Statistics, 2024c). STEM occupations are projected to grow 8 percent between now and 2034—more than double the rate of other fields (U.S. Bureau of Labor Statistics, 2024a). In addition, median annual wages for STEM occupations are higher than for non-STEM occupations (\$103,580 vs. \$48,000) (U.S. Bureau of Labor Statistics, 2024c). Moreover, most of the fastest-growing occupations require at least a bachelor’s degree, highlighting the critical role of higher education in building workforce readiness, promoting economic mobility, and addressing persistent skills gaps (U.S. Bureau of Labor Statistics, 2024a).

STEM occupations are projected to **grow more than double** the rate of other fields between now and 2029.



Median annual wages for **STEM** occupations are **more than double** than those of **non-STEM** occupations.



Source: *Excelencia in Education* analysis using U.S. Bureau of Labor Statistics. *Occupational Employment and Wage Statistics program, 2024.*

LATINOS IN THE STEAM WORKFORCE

To meet our economy’s need for a highly skilled STEAM workforce, the nation must intentionally develop the talent of the populations already driving labor force growth. Latinos are an essential and growing segment of the nation’s labor force, comprising 19 percent of all U.S. workers in 2023 (U.S. Bureau of Labor Statistics, 2024b). Latino labor force participation is particularly strong: 70 percent of Latino adults were employed or actively seeking employment, compared with 63 percent of White adults (U.S. Bureau of Labor Statistics, 2024b). Latinos represent a robust and motivated workforce that is central to the nation’s economic vitality.

70 percent of Latino adults were employed or actively seeking employment, compared with 63 percent of White adults.

Latino Adults



White Adults

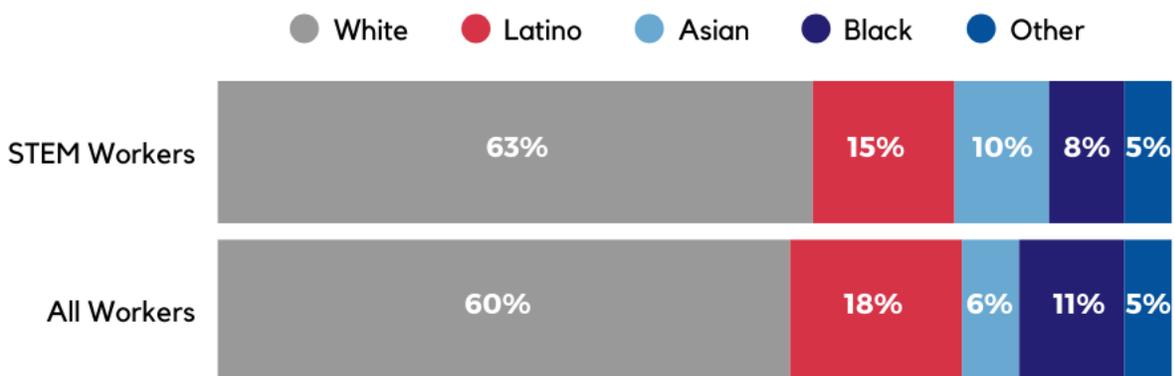


White Adults

Source: *Excelencia in Education* analysis using U.S. Bureau of Labor Statistics. *Occupational Employment and Wage Statistics program, 2024.*

However, Latino representation declines sharply in higher-paying occupational categories (U.S. Bureau of Labor Statistics, 2024b). In 2023, only 26 percent of Latino workers were employed in management, professional, and related occupations, compared with 44 percent of Whites and 46 percent of Asians (U.S. Bureau of Labor Statistics, 2024b). Latinos are also underrepresented in STEM occupations—15 percent of Latino workers were employed in STEM occupations, despite Latinos comprising 18 percent of the overall workforce (National Science Foundation, 2024). Whereas White workers are overrepresented in the STEM workforce—they represented 63 percent of the STEM workforce and 60 percent of the total workforce, illustrating the uneven access to high-growth, high-wage sectors (see Figure 1) (U.S. Census Bureau, 2022). These disparities highlight uneven access to high-wage, high-demand fields that rely heavily on STEAM skills. Without intentional investment in STEAM education, Latino workers risk being concentrated in roles most vulnerable to automation and least connected to long-term wage growth.

FIGURE 1: Comparison of Race/Ethnicity Representation in STEM Occupations and All Occupations



Source: *Excelencia in Education* analysis using U.S. Census Bureau. (2022). American Community Survey (ACS), 1-year public-use file, 2021.



This gap has far-reaching implications for the nation's future. With more than 68 million Latinos living in the United States—now one in every five people—the country cannot meet its innovation and economic goals without fully tapping Latino talent (Hamilton, 2025). These disparities reflect challenges that begin in the education pipeline. Latino students are earning credentials aligned with workforce needs, but their educational attainment drops significantly at the graduate level (*Excellencia in Education, 2023b*)—precisely where most STEM and STEAM careers demand advanced training. For degree completion by discipline, Latinos are most concentrated in

Arts and Sciences, followed by Engineering, Technology, and Math (*Excellencia in Education, 2023b*). These disciplines form the foundation of interdisciplinary industries that rely on the integration of technical expertise and creative competencies at the core of STEAM education.

Expanding STEAM education for Latino students is an economic mobility imperative. The nation's capacity to sustain innovation and competitiveness depends on an interdisciplinary talent pipeline equipped with the full range of STEAM skills: technical expertise, creativity, collaboration, and communication.

STEAM CREDENTIALS EARNED BY LATINOS

The top institutions awarding STEAM educational credentials to Latinos in 2023-24 include 269 unique institutions across 33 states, the District of Columbia, and Puerto Rico. The majority (96%) of the top 25 institutions conferring awards to Latinos at the certificate, associate’s, baccalaureate, master’s, and doctoral levels were HSIs located across 5 states. Of the top institutions awarding education credentials to Latinos, the majority are public, four- and two-year institutions (68% and 32%, respectively) (see Table 2).

Table 2. Total STEAM Credentials Earned by Latinos at Top 25 Institutions and All Institutions, by Degree Level, in 2023-24

Credential Level	Top 25 Institutions	All Institutions	% at Top 25 Institutions
Certificate	10,957	22,194	49%
Associate	40,523	131,215	31%
Baccalaureate	28,287	101,591	28%
Master’s	4,780	17,600	27%
Doctoral	834	2,053	41%
Total	85,381	274,653	31%

Source: *Excelencia in Education* analysis using U.S. Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), 2023 Fall Enrollment, Completion, and Institutional Characteristics Survey

Latinos earning STEAM credentials are concentrated in a small number of institutions. In 2023-24, 31 percent of all Latinos who earned STEAM degrees graduated from one of the top 25 institutions at each credential level. Of Latino STEAM graduates, the highest concentration of those earning credentials was at the certificate level (49%).

About one in three Latinos who earned a STEAM associate degree graduated from a top 25 institution at that level, and about one in four did so when earning a baccalaureate (28%) or master’s (27%) degree. At the doctoral level, 41 percent of Latino STEAM doctoral recipients graduated from a top 25 institution (see Table 3).

TABLE 3. TOP 25 INSTITUTIONS GRADUATING LATINOS IN STEAM⁴

	Institutions	State	HSI	Seal ⁵	ITI ⁶	Sector	Total Degrees Awarded	Total Degrees: Hispanics	% Total Degrees: Awarded
1	Miami Dade College	FL	●	●		4-Pub	7,724	5,690	74%
2	Dallas College	TX	●			4-Pub	5,975	3,119	52%
3	Central New Mexico Community College	NM	●			2-Pub	5,650	2,989	53%
4	Valencia College	FL	●			4-Pub	7,191	2,798	39%
5	Lone Star College System	TX	●			4-Pub	6,162	2,622	43%
6	Cerritos College	CA	●	●		2-Pub	3,370	2,498	74%
7	Florida International University	FL	●	●	●	4-Pub	3,848	2,444	64%
8	The University of Texas Rio Grande Valley	TX	●	●		4-Pub	2,446	2,174	89%
9	Bakersfield College	CA	●			4-Pub	2,832	1,988	70%
10	California State University-Long Beach	CA	●	●		4-Pub	4,307	1,904	44%
11	Texas A & M University-College Station	TX	●			4-Pub	8,652	1,891	22%
12	South Texas College	TX	●	●	●	4-Pub	1,901	1,846	97%
13	El Paso Community College	TX	●			2-Pub	2,077	1,748	84%
14	San Jacinto Community College	TX	●			4-Pub	2,803	1,704	61%
15	Tarrant County College District	TX	●			2-Pub	4,401	1,689	38%
16	Riverside City College	CA	●			2-Pub	2,536	1,647	65%
17	University of Central Florida	FL	●			4-Pub	5,629	1,599	28%
18	Santa Monica College	CA	●			4-Pub	3,999	1,588	40%
19	The University of Texas at Austin	TX	●			4-Pub	7,938	1,562	20%
20	Ventura College	CA	●			2-Pub	2,278	1,555	68%
21	Arizona State University	AZ	●	●	●	4-Pub	8,649	1,540	18%
22	Broward College	FL	●			4-Pub	4,046	1,538	38%
23	Fresno City College	CA	●			2-Pub	2,296	1,425	62%
24	Northwest Vista College	TX	●			2-Pub	2,118	1,420	67%
25	University of California-Davis	CA				4-Pub	7,059	1,377	20%
	Total Top 25:						115,887	52,355	45%

Source: *Excellencia* in Education analysis using U.S. Department of Education, National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), 2023 Fall Enrollment, Completion, and Institutional Characteristics Survey

Note: Some institutions are highlighted in yellow because they are recognized as an HSI, Seal-certified, and an ITI.

FAST FACTS

Of the top 25 institutions where Latinos earned degrees in STEAM in 2023-24:

- All were public institutions.
- Most (24) were Hispanic-Serving Institutions (HSIs).
- Seven earned the Seal of *Excellencia*.
- Three earned the Intentionally Thriving Institution (ITI) certification from *Excellencia* in Education.
- Texas (10) had the most institutions, followed by California (8) and Florida (5).

⁴ To access the full lists of the Top 25 Institutions graduating Latinos across all STEAM fields, please see the Companion Piece.

⁵ Seal of *Excellencia* certified institutions, most of which are HSIs, are setting the pace for institutional transformation and are among the top institutions graduating Latino students.

⁶ *Excellencia* recognizes a subset of institutions as Intentionally Thriving Institutions (ITIs). These institutions have demonstrated commitment to Latino post-completion success through their data, practices, and leadership.

WHAT WORKS FOR LATINO STUDENTS IN STEAM

Excelencia in Education identified evidence-based practices among Intentionally Thriving Institutions (ITIs). These trendsetting institutions go beyond graduating students and demonstrate a commitment to furthering the pipeline from degree completion to high-demand careers, such as those in STEAM. The evidence-based practices identified below by *Excelencia* will benefit Latino, and all, students.

At ITIs, career readiness is woven into every student’s academic experience. Through personalized coaching, targeted programming, and technology-enhanced support, all students—including Latino students—gain guidance to make informed career decisions. Partnerships with employers, alumni, and academic departments provide hands-on opportunities such as internships, mentorships, and job placements, linking classroom learning with professional growth. Institutions track outcomes through data collection and analysis to refine programming and support continuous improvement. By embedding career readiness into campus

culture, ITIs ensure graduates are prepared for meaningful careers and equipped to contribute to their communities.

The institutional programs highlighted below demonstrate the importance of providing financial support and professional development opportunities in STEAM, connecting directly with employers, training future STEAM educators, and leveraging technology to serve all students. These institutional practices are considered to be particularly valuable because they contribute to careers in STEAM in the following ways:

EVIDENCE-BASED PRACTICE	WHY IT WORKS
(1) Provide professional development and financial support opportunities in STEAM	Career panels, conferences, research competitions, and site visits are types of professional development opportunities that allow students to network with working professionals and apply what they learn in the classroom in practice, with financial support to be able to access and participate.
(2) Train future STEAM educators	Educating and training tomorrow’s STEAM educators is critical for preparing students in STEAM courses with the necessary skills and knowledge to thrive in a world driven by technology and innovation.
(3) Leverage technology to expand access and enhance student preparation in STEAM	Using technology to support students provides scalable and personalized learning and career experiences, allowing Latino students to build skills, practice in real-world simulations, and access opportunities anytime, anywhere.
(4) Provide interdisciplinary experiential learning to build collaborative, real-world skills	Experiential, cross-disciplinary learning helps students develop essential collaborative and problem-solving skills by engaging directly with real-world cases and working alongside peers from multiple professions.
(5) Partner with STEAM employers to advance Latino workforce preparation and recruitment	By partnering with employers, institutions can improve their course offerings and directly link Latino students with career prospects. Further, employers can recruit the talent they need to innovate and grow in their industry.

PROVIDE PROFESSIONAL DEVELOPMENT AND FINANCIAL SUPPORT OPPORTUNITIES IN STEAM

Providing students with career and professional development opportunities, such as mentorship opportunities with STEAM faculty or connections with career professionals, allows students to identify and explore careers in STEAM. In tandem, financial support or incentives through these programs are critical for Latino and other low-income students to be able to participate and engage in these activities.

Consider the following example of a program at an Intentionally Thriving Institution (ITI):

University of Arizona's Knowledge River (KR) Scholars Program

The Knowledge River (KR) Scholars Program serves as a national model for preparing library and information science professionals committed to addressing the needs of underserved communities. Among the nation's first graduate programs of its kind, KR trains librarians and information specialists to meet diverse information and literacy needs.

KR Scholars earn an American Library Association (ALA)-accredited Master of Arts in Library and Information Science (MLIS) and benefit from academic support, specialized advising, a cohort-based learning community, mentorship, professional development, and access to an extensive alumni network.

Graduates pursue impactful careers across public and academic libraries, archives, government agencies, and international organizations. Alumni are employed in nearly half of U.S. states, as well as in Australia and Puerto Rico, and include professionals working with tribal nations, federal agencies, and national associations such as the American Library Association and the Association of College and Research Libraries.

To date, nearly \$1 million has been awarded to students for Grad Assistantships, tuition remission, tuition benefits and scholarships, and 19 alumni have pursued or are pursuing doctoral degrees, 15 of whom (78%) identify as Hispanic/Latino. The top employment sectors are academic libraries, public libraries, and academic archives/special collections nationally and globally.

TRAIN TOMORROW'S STEAM EDUCATORS

STEAM occupations are projected to grow faster than all jobs over the next decade (U.S. Bureau of Labor Statistics, 2024), and institutions are leading the way in developing the nation's future STEAM workforce. STEAM educators are

critical for equipping students with the skills and knowledge to participate in the innovation economy and contribute to technological advancement. The demand for developing future STEAM teachers who inspire more students to pursue degrees in STEAM, especially those from underrepresented groups, is driving the need to diversify the future workforce and to be more representative of the U.S. population.

Consider the following example of a program at an Intentionally Thriving Institution (ITI):

FIUteach

FIUteach at Florida International University is a secondary STEM teacher preparation program designed to produce highly qualified mathematics and science educators. Core components include targeted recruitment and retention strategies, an integrated degree pathway combining STEM content and pedagogy, research-based instructional methods, extensive field teaching experiences, and mentorship from master teachers and faculty. Students majoring in mathematics, biology, chemistry, physics, or earth science earn a secondary teaching certification alongside their degree without extending their time to graduation.

The program supports workforce placement through its partnership with Miami-Dade County Public Schools, which provides field experiences with mentor teachers. Additional professional development includes mock interviews, résumé workshops, and networking events with local school administrators, many of which lead directly to employment offers. FIUteach also supports alumni through early-career mentorship and leadership development opportunities.

Since 2016, over 130 students have graduated from FIUteach—92 percent from underrepresented groups in STEM—earning dual STEM degrees and teacher certification (56 in the past three years). Of these graduates, 75 percent entered the teaching profession, primarily in South Florida, and 73 percent remained in teaching for at least four years, exceeding national retention averages.

LEVERAGE TECHNOLOGY TO EXPAND ACCESS TO CAREER PREPARATION

As technology becomes increasingly central to education and career preparation, institutions are innovating to provide students with scalable and accessible learning experiences. Leveraging digital tools and platforms allows students to develop critical STEAM skills, gain hands-on practice in real-world simulations, and connect with professional opportunities they might not otherwise access.

Consider the following example of a program at an Intentionally Thriving Institution (ITI):

Arizona State University's Digital Career Readiness Tools

Arizona State University (ASU) has significantly increased student engagement with career readiness resources through the strategic use of digital career tools that support workforce preparation. Over the past three years, Latino student participation in these platforms has grown steadily, reflecting ASU's intentional approach to building equitable access to career development opportunities.

ASU's Career Support On-Demand platform offers self-paced modules on career exploration, résumé writing, networking, and interview preparation—available anytime, anywhere. Tools like Big Interview are integrated into classroom instruction, allowing students to apply what they learn through practice assignments that strengthen both theoretical and practical skills like interviewing.

This technology-enhanced approach has increased Handshake job applications by 48 percent, increased career services usage—appointments, fairs, and workshops—by 50 percent, and significantly increased digital work simulations and usage of AI-assisted résumé and interview tools.

PROVIDE INTERDISCIPLINARY EXPERIENTIAL LEARNING

As our economy evolves, solving complex, real-world problems increasingly requires interdisciplinary knowledge and collaboration across fields. Institutions are preparing students to meet these demands by creating opportunities to work across disciplines, integrating diverse perspectives, and building a wide range of technical, professional, and problem-solving skills. These experiences equip students to succeed in careers that demand both depth in their field and the ability to collaborate effectively across teams.

Consider the following example of a program at an Intentionally Thriving Institution (ITI):

University of Texas - El Paso's (UTEP) Interprofessional Education (IPE) Program

The Interprofessional Education (IPE) Program provides undergraduate and graduate students with hands-on experience in developing interdisciplinary health solutions. Approximately 83 percent of participants are Latino, and students from Physical Therapy, Occupational Therapy, Speech-Language Pathology, Social Work, Public Health, Nursing, and Pharmacy collaborate

to evaluate clinical cases and consider case management across disciplines. For example, physical and occupational therapy students may explore co-treatment strategies for patients with mobility limitations affecting daily living.

The program emphasizes values and ethics, professional roles and responsibilities, communication, and teamwork, while integrating public health data to guide interdisciplinary solutions and patient advocacy. Since 2017, 5,627 students have participated in three two-hour sessions per year. Surveys show high student engagement: 94 percent report building trust, collaborating across disciplines, and recognizing teamwork in patient-centered care.

PARTNER WITH STEAM EMPLOYERS

Leveraging the connections and expertise of employers in the STEAM industry benefits institutions, students, and employers themselves. Institutions can partner with employers to build workforce development programs, inform their curricula, and improve student post-completion success. Students gain the skills and experience they need to be successful in the workforce. Employers benefit by connecting directly with and recruiting the talent they need to be innovative. In some instances, institutions also partner with AI experts and national higher education networks to lead AI programs and training for the broader community—extending the reach of STEAM preparation beyond enrolled students to working professionals and local business owners.

Consider the following examples of programs at Intentionally Thriving Institutions (ITIs):

Austin Community College's (ACC) Advanced Manufacturing Program

ACC's Advanced Manufacturing program was designed to meet the needs of the rapidly changing semiconductor and advanced manufacturing sectors, particularly in Central Texas. Through partnerships with Samsung Semiconductor, Applied Materials, and NXP Semiconductors, students gain hands-on experience, internships, and job opportunities, connecting classroom learning directly to professional pathways. ACC offers flexible, stackable credential options, including a Bachelor of Applied Technology in Manufacturing Technology, an Associate of Applied Science with specializations such as robotics, and Occupational Skills Awards for rapid entry into the workforce.

Since 2019, ACC has collaborated with industry partners to customize technician training, which evolved into a degree pathway and later a U.S. Department of Labor-registered apprenticeship program. Enrollment doubled from 2023 to 2024, demonstrating strong demand and workforce alignment.

Miami Dade College's (MDC) AI Clinics

Miami Dade College is at the forefront of a national movement to make AI education accessible and equitable, serving as the first Hispanic-Serving Institution (HSI) Regional Hub for AI education in partnership with California State University, Northridge (CSUN). Through this collaboration, CSUN provided critical support in shaping the AI Clinics' hands-on curriculum and training structure, and funded the translation of AI course materials—including an Apple-developed curriculum—into Spanish, ensuring that language is never a barrier to opportunity.

The AI Clinics are four-week, blended-format sessions led by expert faculty and alumni that equip small business owners and professionals with practical AI skills for content creation,

productivity, and decision-making. Participants earn industry-recognized credentials, including Google Career Certificates, upon completion. MDC's dedicated faculty have collaborated with industry experts in AI to develop cutting-edge applied AI programs that serve learners ranging from AI enthusiasts seeking to expand their knowledge to tech professionals aiming to upskill.

Since its debut in Spring 2025, more than 350 local small business owners and professionals have completed the AI Clinics, and 100 percent of surveyed graduates rated the experience as "very valuable." To date, 70% of the clinics' participants have been Latino. The MDC–CSUN collaboration exemplifies how national expertise and local knowledge can work in concert to empower communities, positioning Miami Dade College as a model for HSIs nationwide.

CONCLUSION

The future of the U.S. workforce will be shaped by both the rapid integration of artificial intelligence (AI) across industries and the continued growth of the Latino workforce. As AI reshapes job tasks and workplace expectations, workers who can integrate technical knowledge with human judgment, creativity, and collaboration will be increasingly valuable. STEAM education—through its interdisciplinary approach—prepares individuals not only to enter the workforce, but to apply their training in evolving contexts, adapt to technological change, and contribute to innovation in an AI economy.

Latinos are earning credentials aligned with workforce needs and represent a substantial and growing share of STEAM degree recipients, particularly at institutions that intentionally serve Latino students. However, persistent gaps in advanced degree attainment and underrepresentation in higher-paying STEAM occupations limit Latinos' economic mobility and constrain the nation's ability to meet workforce demand. Expanding access to interdisciplinary, career-connected STEAM education through intentional investment is essential for enhancing both individual outcomes and the broader workforce pipeline.

Institutions and employers each have a responsibility in preparing the workforce for continued technological change. When institutions align curricula, data, and post-completion supports with evolving workforce needs—and when employers partner with institutions to develop, recruit, and retain Latino talent—the result is a more adaptive and



resilient economy. Strengthening STEAM education and expanding opportunities for Latino students will be central to ensuring that the nation's workforce is prepared to lead in a global AI economy.

CALL TO ACTION IN STEAM

The future of American innovation depends on how effectively institutions and employers collaborate to prepare and elevate Latino talent in science, technology, engineering, the arts, and mathematics (STEAM). Building strategic partnerships that cultivate interdisciplinary learning and career pathways is essential to meeting the demands of a rapidly evolving, knowledge-based economy. By working together to expand access, align curricula with workforce needs, and provide meaningful career-connected experiences, institutions and employers can accelerate Latino students' progression into high-growth STEAM fields.

FOR INSTITUTIONS

Institutions are pivotal in preparing Latino graduates for success in an economy driven by interdisciplinary thinking, training, and technological advancement. By embedding STEAM principles across curricula and cultivating partnerships with employers, institutions can equip Latino students with the skills, networks, and experiences necessary to thrive beyond degree completion.

Institutions can:

- **Include the arts in STEM curricula.** Institutions should intentionally integrate the arts into STEM education to prepare students for success in industries where creativity, design, and innovation drive progress. Transforming STEM into STEAM broadens students' capacity for critical thinking, collaboration, and problem-solving—skills that are essential in an increasingly interdisciplinary and dynamic workforce.
- **Assess Latino participation in STEM and STEAM programs.** Institutions should examine enrollment, retention, and access across STEM and STEAM pathways to identify where Latino students are underrepresented or face barriers to entry. By expanding early exposure, outreach, and enhanced program design, institutions can increase awareness of STEAM opportunities and strengthen pathways that support Latino and other post-traditional students' participation and success in these fields.
- **Expand post-completion STEAM support.** Institutions can extend their impact beyond graduation by offering mentorship, job placement, and professional development opportunities that emphasize interdisciplinary problem-solving, creativity, and applied learning across STEAM fields.
- **Evaluate and deepen industry partnerships.** Institutions should conduct a strategic review of employer collaborations to identify where partnerships already exist and where new opportunities can emerge.
- **Redefine post-completion success metrics.** Institutions can generate valuable insights into the effectiveness of their programs and identify how Latino graduates navigate evolving STEAM careers by measuring how graduates apply their training in the workforce.
- **Collaborate to strengthen the STEAM talent pipeline.** Institutions can engage in growing STEAM innovation ecosystems that advance national cross-institutional partnerships—such as the [Global HSI Equity Innovation Hub](#)—to align curricula, share data and practices, and connect with employers to create seamless pathways and transitions from education to career.

By fostering deep, intentional partnerships with employers and other institutions, higher education can drive Latino post-completion success and position Latino graduates as leaders in the nation's most innovative sectors. Institutions that embrace collaboration in STEAM education are more likely to see stronger career outcomes, increased alumni engagement, and greater contributions to community and economic vitality.

FOR EMPLOYERS

Latinos are central to the nation's economic growth and future workforce. As industries increasingly rely on interdisciplinary approaches to address complex challenges, employers must form intentional partnerships with institutions that develop Latino talent with both technical expertise and creative problem-solving skills. The integration of the arts with STEM disciplines fosters innovation, adaptability, and collaboration—qualities vital for a globally competitive workforce.

Employers can:

- **Invest in interdisciplinary Latino talent ecosystems.** Employers can expand pathways into STEAM careers by funding paid research opportunities, offering interdisciplinary internships, supporting scholarships for Latino, and all, students, and committing to hiring local Latino graduates.
- **Align workforce and academic goals.** Employers can collaborate with institutions to align hiring needs with curricular priorities, ensuring that recruitment strategies reflect the experiences of Latino students while strengthening institutional capacity to deliver interdisciplinary, workforce-relevant education.

- **Collaborate on data and insight sharing.** Employers and institutions can provide deeper insight into post-completion outcomes by engaging in joint data initiatives—helping both identify where interdisciplinary skills are most valuable, forecast emerging industry needs, and inform program design that bridges academic preparation with real-world application.

- **Engage faculty as innovation partners.** Employers can strengthen ties with faculty by hosting facility tours, co-developing applied research projects, advising on curricula that integrate arts and technology, and supporting paid, project-based internships that reflect real industry challenges.

- **Connect professionals with work opportunities.** Employers can mentor Latino students, share interdisciplinary career experiences, and offer guidance on navigating post-graduation transitions into STEAM fields by linking current employees to their alma mater or partner institutions, and employee resources groups, especially Hispanic groups.

When employers intentionally engage with institutions serving Latino students, they create sustainable ecosystems that foster interdisciplinary talent pipelines. These partnerships fuel innovation, enhance community prosperity, and ensure that Latino professionals play a leading role in shaping the nation's future.

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