



Improving Student Outcomes:

Quantifying the Impact of Digital Literacy
and Creative Skills on College and Career



With rising tuition and the fallout from the pandemic, the value of higher education is increasingly coming into question. Remote and hybrid learning accelerated challenges for institutions and faculty, including declining enrollment, limited funding, and the struggle to ensure educational equity and access. Students experienced financial and emotional hardships as well as diminished engagement in their coursework.

As colleges and universities continue to balance in-person and online programs, they are using learnings from the past year to strengthen their offerings and create more value for their students. They're working to ensure that higher education delivers equity, access, improved learning outcomes, a more engaging experience, and better career prospects.

At Adobe, we've long believed that students, educators, and employers value digital literacy and creative skills, and that these skills are the key to driving greater value in higher education. Not only do **74%** of students wish there were more of a focus on creativity in the classroom and **69%** of educators feel there's not enough emphasis on creative skills in today's curricula, but industry agrees:

- [The World Economic Forum](#) ranks creativity and digital literacy in the **top ten skills required in the workforce in 2025**.
- [LinkedIn](#) reported that creativity ranked as the **#1 most in-demand workforce skill** in 2019 and 2020.
- And in [a study](#) Adobe ran in 2019, we found that even though 71% of 2 million online job postings call for communication skills, 50% call for creativity skills, and 41% call for collaboration skills, **more than 75% of online resumes do not list communication, creativity, or collaboration skills**.

So how can we encourage more colleges and universities to start incorporating these essential 21st-century skills into their curricula.

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Building the case for developing students' digital literacy and creative skills.

To effectively develop their students' digital literacy and creative skills, higher education institutions need to go beyond art, design, and technology courses and teach these skills across disciplines and across the curriculum. Such an effort requires big investments in faculty development, technology tools, and learning resources, so college and university leaders need proof that these skills have a direct impact on student outcomes.

Adobe recently initiated research to quantify those impacts for students, both while they're in school and when they enter the workforce. We engaged the higher education research firm [Civitas Learning](#) to measure the impact of integrating Adobe Creative Cloud into the curriculum across disciplines at higher education institutions. We also engaged [LinkedIn](#) to study the impact of having creative skills on the career trajectory of recent graduates and those already in the job market, across a broad range of job functions and industries.

With the results in, we can now provide evidence of what we've long held true: digital literacy and creativity are essential to empowering learners, unlocking professional opportunities, and helping higher education institutions meet their goals for retention and engagement.

Digital literacy and creativity are essential to empowering learners.



Discovering positive student outcomes at three US universities.

To quantify the impact of digital literacy on student outcomes, Civitas looked at three universities that are incorporating the use of Adobe Creative Cloud into coursework and assignments in their general education classes and beyond:

- **The University of Texas at San Antonio (UTSA)**, a public research university serving over 34,000 students and one of the first US schools designated as a Hispanic Serving Institution. As an [Adobe Creative Campus](#), UTSA provides Creative Cloud to all its students, faculty, and staff.
- **California State University, Fullerton (CSUF)**, a public research institution and the largest in the CSU system with over 41,000 enrolled students. CSUF is also a Hispanic Serving Institution and an Adobe Creative Campus.
- **East Tennessee State University (ETSU)**, a public research institution with over 14,000 students. While not an official Adobe Creative Campus, ETSU actively supports the curricular use of Creative Cloud in a growing variety of classes and delivers Creative Cloud certification courses for students, faculty, and the surrounding community.

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In their research, Civitas found that building students' digital literacy with Creative Cloud leads to quantifiable student outcomes in the classroom across student segments — including minoritized student populations. Civitas looked at four outcome metrics that are most commonly used to measure higher education performance:

- **Course mastery** — earning an A or B in a course versus a C/D/F/W
- **Course grade** — on a four-point scale
- **Term GPA** — the average of all course grades earned in a term, on a four-point scale
- **Persistence** — re-enrolling at the institution from term to term

Civitas found that Creative Cloud had a clear impact on students' course mastery:

- Across all UTSA undergraduate students, those in courses using Creative Cloud achieved **4.5%** higher rates of A and B grades over those who were not.
- CSUF students enrolled in courses that used Creative Cloud earned higher grades than equally matched peers in non-Creative Cloud sections of the same course:
 - **14.3%** higher A / B grades in a Health Sciences course
 - **8.3%** higher A / B grades in a Business Administration course

Course grades were also positively impacted by use of Creative Cloud in assignments. Across all UTSA students, those in courses using Creative Cloud achieved **8%** higher course grades over those who were not.

Civitas found that Creative Cloud had a measurable impact on student persistence and retention.



On a four-point grading scale, Civitas found a significant impact on course grades.

- UTSA students in their first semester (freshmen) enrolled in courses using Creative Cloud earned **.56** higher average course grades.
- CSUF students enrolled in courses that used the Adobe Premiere Rush video editing app earned **.24** of a higher grade.
- All UTSA undergraduates enrolled in courses using Creative Cloud earned **.23** higher average course grades (e.g., 3.23 in Creative Cloud sections vs. 3.00 in non-Creative Cloud sections).

This increase in course grades was even more profound among key segments of the student population.

- UTSA's bottom quartile of students (least likely to earn high grades) enrolled in Creative Cloud courses earned **.39** higher average course grades versus equally matched students in non-Creative Cloud courses.
- Black and African American students at UTSA earned **.52** of higher average course grades in courses using Creative Cloud versus equally matched students in non-Creative Cloud courses.
- UTSA students in the bottom quartile saw benefits across other courses with higher term GPAs. In fact, students enrolled in courses using Creative Cloud earned **.18** points higher than peers who were not.

Additionally, Civitas found that Creative Cloud had a measurable impact on student persistence and retention. UTSA students saw **8%** increased retention among those using Creative Cloud and least likely to re-enroll for the next term.

Quantifying student success post-graduation.

Academic success is certainly important, as students who persist and do well in college can put their skills and know-how to work in their careers. But Adobe also wanted to see if these essential skills that help students succeed in their courses also help them succeed when they enter the job market.

To determine the extent to which employers value creative skills, we asked LinkedIn to delve into their data. LinkedIn researchers found that the volume of **hires possessing creative skills has grown 78%** in the past two years, from January through May of 2019 to January through May of 2021.

The researchers also found that job candidates who list creative skills on their LinkedIn profiles see improved career progression, pay, and advancement across a wide variety of professions:

- Recent graduates working in varied functions secured **higher starting salaries of up to 16%** when they listed creative skills on their LinkedIn profiles compared to those who did not possess or promote these skills.
- Recent graduates with **creative skills listed in their LinkedIn profiles are 2x as likely to be in LinkedIn's Young & Upwardly Mobile segment**, which includes people who have been promoted in the last 18 months and have a job seniority level of Senior+, or who have obtained an advanced degree in the past 18 months.

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Professionals with creative skills on their LinkedIn profiles saw higher salary increases compared to those who didn't list creative skills — across a wide range of industries.

- In the past three years, LinkedIn users who listed creative skills in their profiles saw **2–3x** higher salary increases, when changing roles, across varied industries like aviation and aerospace, food and beverage, civil engineering, military, hospitality, and staffing/recruiting.
- LinkedIn users who listed creative skills in their profiles saw **2–3x** higher salary increases in varied job functions like community and social services, sales, and human resources.
- The LinkedIn study also showed that, over the past three years, professionals with creative skills experienced better career trajectories compared to those who didn't list creative skills.
- Creative skills also seemed to offer downside protection for industries impacted by the pandemic.

Going all-in on 21st-century skills to create classroom and career advantages.

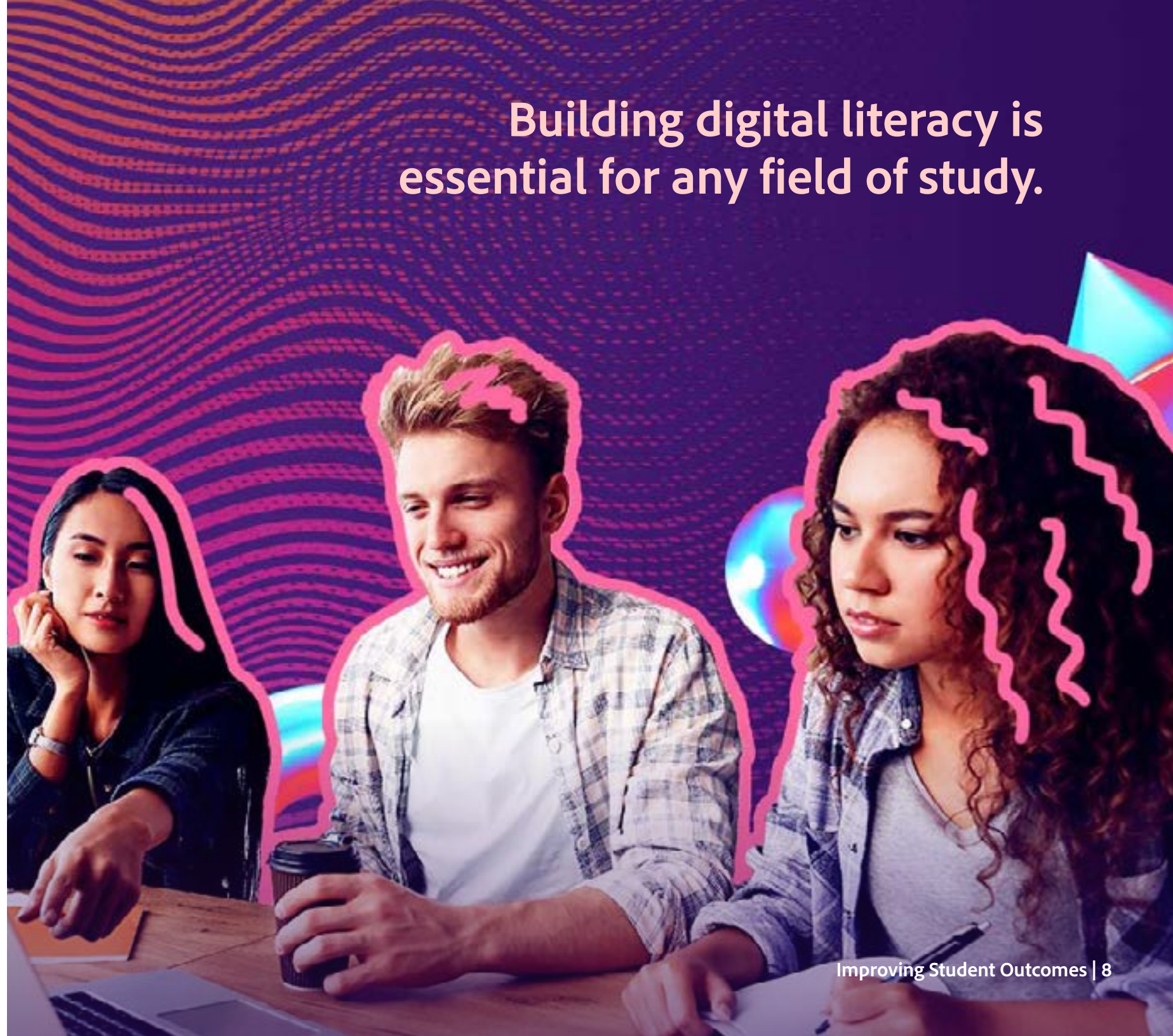
One of the schools featured in the Civitas study, UTSA, serves as a great example for how to build digital literacy and creative skills that help prepare students for the future. Melissa Vito, Vice Provost for Academic Innovation, leads many of the efforts to support students' academic and career success, and she believes that the most important career skill is digital literacy.

“Building digital literacy is essential for any field of study. Students need to learn how to communicate ideas and gain skills that will serve them well throughout their careers,” she says. “It’s also vital for UTSA faculty to find creative approaches to teaching to improve student learning, whether we’re working with students online or in classrooms.”

To achieve these goals, UTSA is taking a holistic approach. Leadership has committed to transforming the academic experience by integrating Creative Cloud into courses across the curriculum, developing faculty skills, and establishing champions who can help faculty and students make the most of their powerful tools for creating images, graphics, designs, videos, animations, user experiences, 3D, and so much more.

[Learn more about UTSA's approach >](#)

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Integrating 21st-century skills at your school.

Clearly, institutions need to make digital literacy and creativity a priority in order to fulfill their missions and prepare students for the modern workplace. So how can your school integrate Creative Cloud effectively to realize similar impacts?

Adobe offers a wealth of resources to support institutions on their journeys, including:

The Adobe Creative Campus program

If your institution is committed to transforming teaching and learning with digital literacy, you may have the opportunity to become an Adobe Creative Campus. You'll join other innovative schools that offer Creative Cloud to their broad student body through enterprise license agreements. You'll also have the opportunity to collaborate on digital literacy initiatives, hear from industry thought leaders, share resources and learnings with each other, accelerate digital literacy initiatives school-wide, and participate in faculty development workshops.

Adobe Education Exchange

In this free online portal, faculty in all disciplines can find [teaching and learning resources](#) to help them incorporate Creative Cloud into student assignments and projects. Discover cross-discipline use cases, lesson plans, rubrics, learning modules, examples of student work, and full professional development workshops like [Preparing Students with Essential Creative Skills](#).

Adobe Creative Cloud Across the Curriculum:

A Guide for Students and Teachers

Written by Dr. Todd Taylor, professor of English at the University of North Carolina at Chapel Hill, this online guide is designed for students and faculty in all academic disciplines who want to tackle their work in innovative ways using digital media.

Adobe Creative Educator program

In this community program, educators receive curated professional development materials, information about virtual and in-person events, and the opportunity to connect with like-minded educators from around the world. Educators earn badges for completing each level of the program.

The Creative Educator podcast

Join curator Tacy Trowbridge from Adobe as she welcomes expert guests to discuss the power of creativity in education — from the practical to the abstract, inside and outside the classroom.

Adobe Cultivating Digital Literacy course

This free course provides professional development for educators in non-core courses, making it easy for them to assign projects and assignments that include the use of Creative Cloud applications.

Creative Cloud institution-wide licensing

Adobe offers affordable licensing that gives all your students and faculty access to Creative Cloud tools — even when they're doing their work from home.

Learn more

Visit our landing page to dive into the details of this Civitas and LinkedIn research.