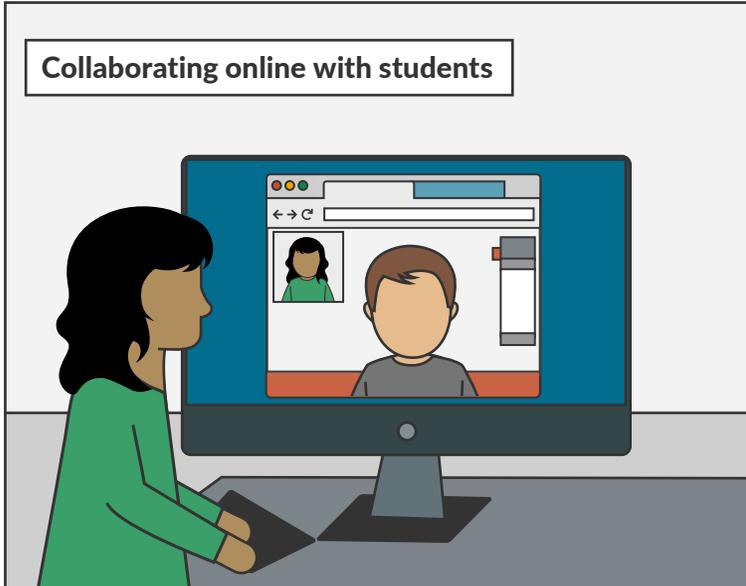


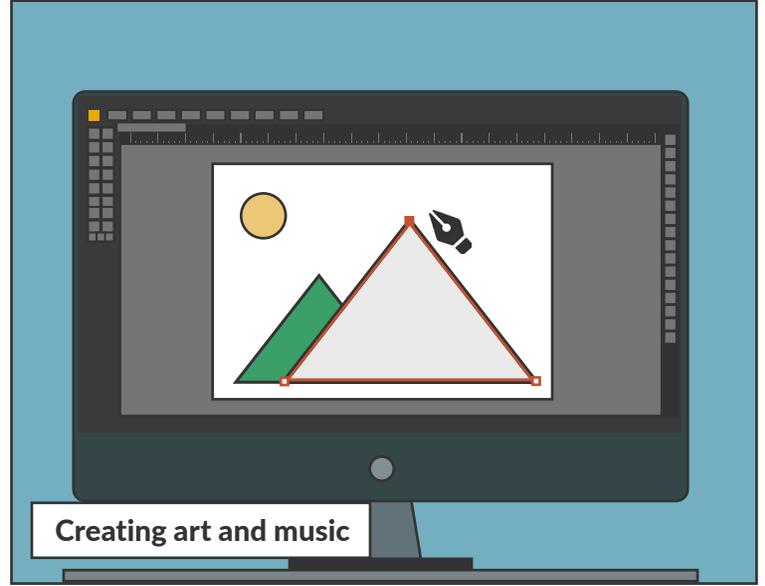
Integrating technology to develop 21st century skills in rural Iowa

Education leaders in Iowa have identified the following set of learning and innovation skills that are important for student success in the 21st century.

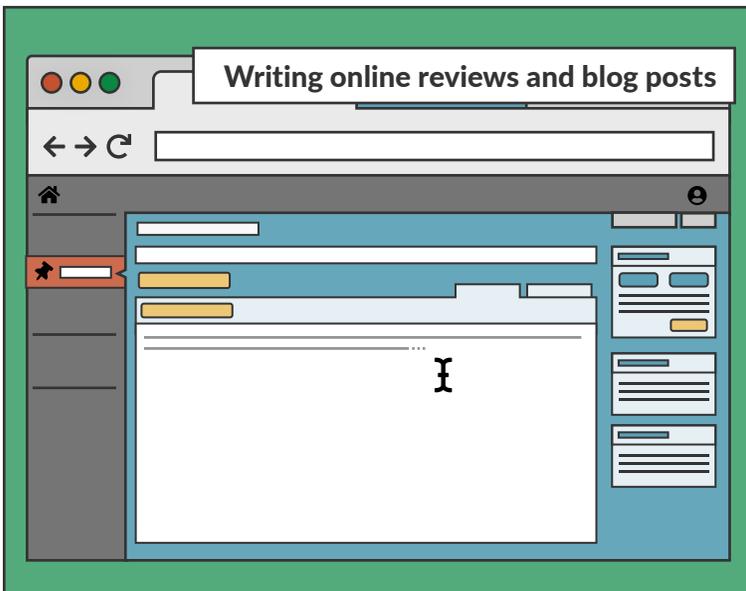
Collaboration: working among and across personal and global networks to achieve common goals.



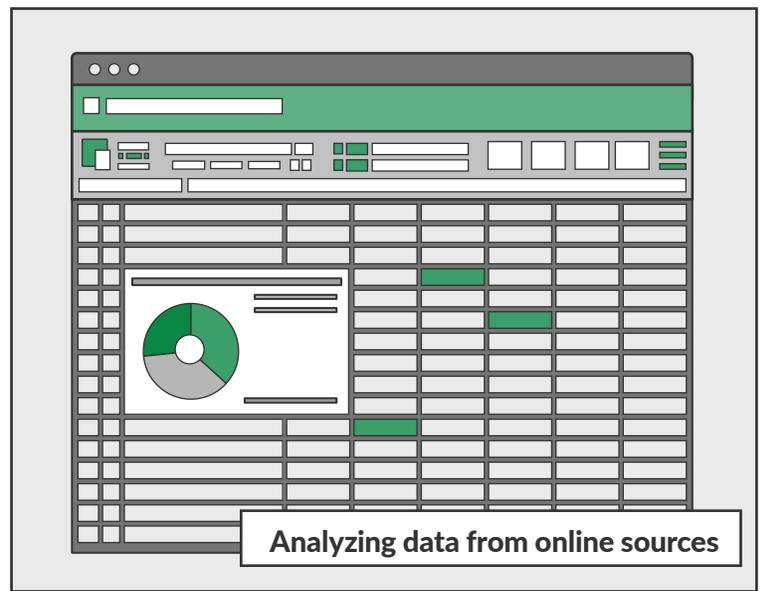
Creativity: generating new or original thoughts, interpretations, products, works, or techniques.



Technology has the potential to connect students with opportunities to practice and develop these 21st century skills.

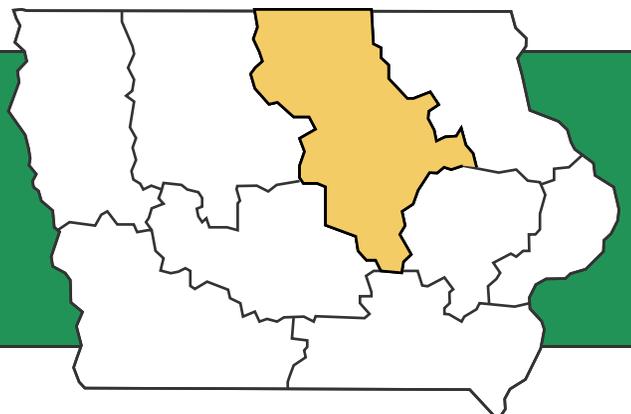


Complex Communication: sharing information through multiple means, including visual, digital, verbal, and nonverbal interactions, leading to an accurate exchange of information and ideas.



Critical Thinking: accessing and analyzing key information to develop solutions to complex problems that may have no clear answer.

The districts within the Central Rivers Area Education Agency (AEA) in rural Iowa have invested in technology infrastructure and devices for students and teachers to assist them in building these skills.

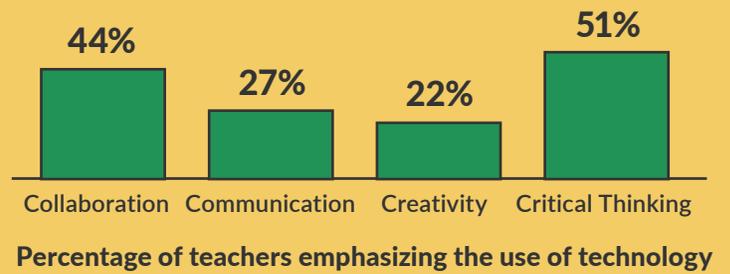


Central Rivers AEA partnered with Regional Educational Laboratory (REL) Midwest to examine the extent to which teachers in the districts are integrating technology to support the development of 21st century skills as well as to describe teacher perceptions of school supports for technology integration.

Nearly **90%** of teacher survey respondents reported that students use technology in the classroom daily or weekly.



However, the percentage of teachers that reported **using technology to develop 21st century skills** varied.



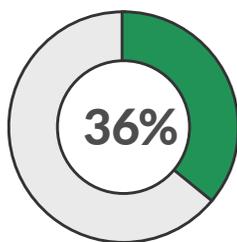
Math teachers were least likely to ask students to use technology for **communication, collaboration, and creativity.**

Teachers with 4–9 years of teaching experience were most likely to ask students to use technology for collaboration and creativity, and teachers with 20 or more years of experience were least likely.



Not all teachers felt they had enough professional development and high-quality school supports.

Only **36%** of teachers rated the quality of technology-focused professional development as above average or excellent.



The findings show that although teachers use classroom technology frequently, they are not consistent in using it in ways that support the development of 21st century skills.

School leaders should consider integrating technology-focused professional learning experiences into day-to-day operations and use settings such as departmental meetings, evaluations, and classroom observations to reinforce their vision for technology use.

Margolin, J., Pan, J., & Yang, R. (2019). *Technology use in instruction and teacher perceptions of school support for technology use in Iowa high schools* (REL 2019-004). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest. Retrieved from <https://ies.ed.gov/ncee/edlabs>.

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