**Technology**

VCSU became the nation’s second laptop university in 1996. The use of technology is part of the university’s culture. VCSU had representation on the development of the Common Metrics Entry, Exit, Transition to Teaching (Completer), and Supervisor (Employer) surveys that were developed by Bush Grant funded Education Preparation Providers (EPPs) who were fortunate to participate in the Network for Excellence in Teaching (NExT) initiatives to improve teacher preparation. The Common Metrics surveys became available to the ND EPPs and later to other EPPs in Minnesota and other states. VCSU knows its own data and also has an opportunity to view its findings with aggregate data from the other institutions. VCSU does not use the aggregate data comparisons for recruiting or promotion, but the EPP would like to share this comparative data as evidence that the EPP’s culture for using technology is beneficial in the preparation of its teacher candidates ([Evidence 1 InTASC Report Data for Technology from Exit Survey page 4, Completer Survey page 7, and Employer Survey page 9](https://vcsuintasc.myefolio.com/Intasc2021/Uploads/InTASC%20Report%20Technology%20Data.pdf)).

Technology safety and the use of technology to enhance instruction are important skills for teacher candidates to learn. The primary learning source in the professional education sequence is EDUC 300 Educational Technology. Teacher candidates are exposed to a variety of applicable technology tools that help them build their professional learning network and enable candidates to explore ways in which technology can enhance their classrooms through the creation of dynamic learning experiences. Educational technology is always growing and changing so no two semesters are exactly the same in the EDUC 300 course. The instructor is continually finding ways to bring the most relevant technology to the classroom for exploration.

Faculty members within the EPP’s School of Education are given multiple opportunities and encouragement to attend professional development in the field of educational technology. EPP instructors have taken advantage of attending [Metro Tech Camp](https://metrotechcamp.com/) (FM metro area school technology collaboration), ISTE Summer Learning Academy, as well as the yearly International Society for Technology Education (ISTE) conference to name a few. The EPP’s faculty members are committed to professional development by individually earning digital badges such as: Apple Teacher, Pear Deck and FlipGrid among others.

Teacher candidates in EDUC 300 are from varying majors, so their course experiences vary to accommodate content and grade-level appropriate technology exploration. The EDUC 300 classroom thrives on voice and choice in the candidates’ learning experiences which creates a learner-centered approach to the direction the class can fluidly move. Candidates research, explore, and ultimately write a Dynamic Learning lesson plan that utilizes the technology of their choice as a form of assessment which incorporates the 4C’s of 21st Century Learning Skills (communication, collaboration, creativity, and critical thinking) and the International Society for Technology in Education (ISTE) Standards based on the template created from our book study “Shake Up Learning” by Kasey Bell.

Topics that are explored include, but are not limited to ISTE Standards, Google applications (digital breakout using Google Forms, Google Slides for design and collaboration, Google Sites, Tour Creator), growing our Professional Learning Network/Professional Development, Coding, Learning Management Systems, Building Classroom Websites, Immersive Technology (AR/VR/Mixed Reality with Merge Cubes), Cyber Security, Evaluation of Apps, #FlipHunts, QR Codes, Stop Motion, Green Screen, Podcasting, App Creation, EdPuzzle, Plickers, App Smashing, and Seesaw.

The following videos include semester accomplishments and work samples from teacher candidates:

* [Spring 2019 Semester Review Celebration of Accomplishments](https://youtu.be/_ZBBKxEUZYw)
* [Fall 2019 Semester Review Celebration of Accomplishments](https://youtu.be/ALsqRGJmDGk)

Dynamic Learning Experience Template ([Evidence Technology Education Lesson Plan](https://vcsuintasc.myefolio.com/Intasc2021/Uploads/Dynamic%20Learning%20Experience%20(DLE)%20Template.pdf)).

[Creation Choice Board](https://docs.google.com/presentation/d/e/2PACX-1vQLH8xY4qp2vMRhHEETJ3sN8uQOo6e9m2_XoXTl1JQat2uSU-hUX3rBTWOS2d_Nsgp5B0nVWhBkji3g/pub?start=false&loop=false&delayms=3000) that allows voice and choice for learning experiences.

[PowerPoint Creation Website](https://mrsrichmanedtech.weebly.com/) which includes the directions for project choices as well as showcases previous students’ work.

In the Fall of 2020, teacher candidates in the EDUC 300 course used [Sphero Mini Coding Adventure](https://read.bookcreator.com/XKgM94kjvzNKxLGUS3LADc9fgcZ2/Ua2T0mbARvCVN9utBF6vCw). A sample completed by a teacher candidate in the Fall of 2020 is available using this link ([Evidence Sphero Adventure Teacher Candidate Sample](https://read.bookcreator.com/TJFXpkNvFKf9luWngHQCBTVerri1/UXAh_XWhTWe4LB9KxqxlfQ)). The Spring 2019 and Fall 2019 semester accomplishment videos display coding using Ozobot, Scratch, and Swift.

Teacher candidates not only learn in the EDUC 300 Educational Technology, but from the use of technology within the culture of the EPP, the modeling of faculty, and the hands-on application candidates experience with laptops or iPads. The impact of COVID-19 in the spring of 2020 has highlighted the importance of teacher preparation related to the use of technology to enhance instruction. The August 5, 2020, annual data sharing session with K-12 educators and VCSU faculty included a section on discussing how teacher preparation can be improved in the midst of a [pandemic](https://vcsuintasc.myefolio.com/Intasc2021/Uploads/Annual%20Data%20Sharing%20COVID-19%20Comments.pdf). Ideas that came from K-12 educators involved preparing teacher candidates to be open-minded and flexible. The educators mentioned exposure to Teams/Zoom, flipped classrooms, learning to teach in an online or HyFlex format, and ways to build positive relationships with students despite not being face-to-face in the classroom. Educators also mentioned experience with iPads, Universal Design, Canvas, and SeeSaw. Technology is an area where VCSU works for continuous improvement. The EDUC 300 Technology Education instructors model lifetime learning and a growth mindset for the teacher candidates.

As teacher candidates near graduation, they are expected to identify at least one meaningful technology project and reflect on how they have used technology in their field experiences ([Evidence Sample 1](https://oliviahammerschmidt.myefolio.com/Technology), [Evidence Sample 2](https://aprilberntson.myefolio.com/Tech), [Evidence Sample 3](https://adrianshea.myefolio.com/Technology)).

The data indicate that over 90% of first-year teachers (58.6% Agree + 32.0% Tend to Agree = 90.6%) feel they were prepared to engage their students in using technology to achieve learning goals ([Evidence 1 InTASC Report Data for Technology page 7](https://vcsuintasc.myefolio.com/Intasc2021/Uploads/InTASC%20Report%20Technology%20Data.pdf)). The first-year teachers in the spring of 2020 indicated higher mean scores and percentages of agreement than 2019. The fact that first-year completers had to utilize technology in the midst of COVID-19 circumstances and 93% of the completers indicated they were well prepared is pretty strong.

The overall ratings and the spring 2020 data are encouraging. The 2020 annual data sharing session and faculty discussions have addressed how COVID-19 situations have increased the need for faculty to model and engage teacher candidates in learning and using technology to promote student learning. The VCSU mean score ratings in the area of technology are higher than the super aggregate ratings from other EPPs using the same assessment items ([Evidence 1 InTASC Report Data for Technology on pages 4, 7, and 8](https://vcsuintasc.myefolio.com/Intasc2021/Uploads/InTASC%20Report%20Technology%20Data.pdf)). The data are gathered from seniors exiting the program, from completers, and the employers of EPPs’ first-year teachers. The unit knows that technology growth is an important aspect of continuous improvement.