Appendix. Survey Instrument Items.

Technology Proficiency Survey for Educators (TPSE) Survey Items

	I feel confident I could….
1.	…use technology to improve my teaching practices.
2.	…participate in local and global learning networks to pursue professional interests.
3.	…use educational technology research to inform and improve my classroom practices.
4.	…lead and support other educators in the integration of technology in the classroom.
5.	…use technology to meet the diverse needs of students in my classroom.
6.	…model and promote safe, legal and ethical practices with digital tools.
7.	…model and promote the management of personal data and digital identity.
8.	…provide students with the opportunity to make positive and responsible contributions in online communities.
9.	…use technology to create authentic learning experiences.
10.	…use technology to communicate appropriately with students, parents and colleagues to support and enhance student learning.
11.	…use technology to collaborate with teachers or students who are distant from my classroom.
12.	…use technology to create, adapt and personalize learning for students in my classroom.
13.	…create digital learning environments that engage and support student learning.
14.	…create learning opportunities in which students use computational thinking to innovate and solve problems.
15.	…model and nurture creativity in communicating knowledge to students and peers.
16.	…facilitate learning in which students take ownership of their learning goals and outcomes.
17.	…use digital tools for assessment to inform instruction.
18.	…use technology to design and implement a variety of assessments to accommodate learner needs.
19.	…use technology to capture student learning in a variety of ways.
20.	…use social media tools for instruction in the classroom. (ex. Facebook, Twitter, etc.)
21.	…create a wiki or blog to have my students collaborate.
22.	…teach in a one-to-one environment in which the students have their own devices.

Christensen, R. (2021). Validation of a technology proficiency survey for educators. In E. Langran & L. Archambault (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 782-791). Association for the Advancement of Computing in Education (AACE).

SQD Survey Items

During my pre-service training…
SQD1 I have seen many examples of technology use in an educational setting.
SQD2 I observed sufficient technology use in an educational setting in order to integrate applications myself in the future.
SQD3 I saw good examples of technology practice that inspired me to use technology applications in the classroom myself.
SQD4 The potential of technology use in education was demonstrated concretely.
SQD5 I was given the chance to reflect on the role of technology in education.
SQD6 We discussed the challenges of integrating technology in education.
SQD7 We were given the opportunity to discuss our experiences with technology in the classroom (i.e., during internships).
SQD8 There were specific occasions for us to discuss our general attitude towards technology in education.
SQD9 I received sufficient help in designing lessons that integrated technology.
SQD10 We learned how to thoroughly integrate technology into lessons.
SQD11 We received help to use technology when developing educational materials.
SQD12 I received a great deal of help developing technology-rich lessons and projects to use for my internship.
SQD13 There were enough occasions for me to work together with other students on technology use in education (i.e., we developed technology-based lessons together).
SQD14 I was convinced of the importance of cooperation with respect to technology use in education.
SQD15 Students helped each other to use technology in an educational context.
SQD16 Experiences using technology in education were shared.
SQD17 There were enough occasions for me to test different ways of using technology in the classroom.
SQD18 I was able to learn to use technology in the classroom through the internships.
SQD19 I was encouraged to gain experience in using technology in a classroom setting.
SQD20 Students were encouraged when they attempted to use technology in an educational setting.
SQD21 I received sufficient feedback about the use of technology in my lessons.
SQD22 My competencies with technology were thoroughly evaluated.
SQD23 I received sufficient feedback on how I can further develop my technology competencies.
SQD24 My competencies in using technology in the classroom were regularly evaluated.

Tondeur, J., van Braak, J., Sang, G., Voogt, J., Fisser, P. & Ottenbreit-Leftwich, A. (2012). Preparing pre-service teachers to integrate technology in education: A synthesis of qualitative evidence. *Computers & Education, 59*(1), 134-144.

TPACK Core Items

TPACK 1 I know about technologies that I can use for understanding and doing in teaching my subject.
TPACK 2 I can choose technologies that enhance the content for a lesson in my subject.
TPACK 3 I know how to use technologies to present concepts of the subject I am teaching, in a different way.
TPACK 4 I can choose technologies that enhance the pedagogy of a lesson.
TPACK 5 I can choose technologies that enhance students' learning process.
TPACK 6 I am thinking critically about how to use technology in my class.

TPACK 7 I can teach lessons that appropriately combine content, technology and pedagogy.
TPACK 8 I can select technologies for my class that enhance what I teach, how I teach and what students learn.

Fisser, P., Voogt, J., Van Braak, J., & Tondeur, J. (2013). Unraveling the TPACK model: Finding TPACK core. *Proceedings of society for information technology & teacher education international conference 2013* (pp. 2484–2487). Association for the Advancement of Computing in Education (AACE).