

Digital Technology Self-Efficacy Survey Instrument

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This Digital Technology Self-Efficacy survey was constructed using 17-item scale from Holcomb et al., 2004. The computer self-efficacy scale developed by Holcomb et al. (2004) from Cassidy & Eachus' (2002) self-efficacy instrument of 30-items. Holcomb et al.'s (2004) investigation identified 17 items through a factor analysis and had 89% reliability. In our digital technology self-efficacy survey, we changed the word *computers* to the words *digital technologies* in order to update the instrument and offer a specific definition for respondents. This scale aims to measure respondents' confidence in technology in general.

Survey and Items

Item #		Strongly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)
1	I find working with digital technology very easy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2 -RC*	I am very unsure of my abilities to use digital technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3-RC	I seem to have difficulties with most of the software or online applications I have tried to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4-RC	Digital technology frightens me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5-RC	I often have difficulties when trying to learn how to use a new software package or online application.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6-RC	I rely heavily on instructions and manuals to help me use digital technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Most of the software packages or online applications I have had experience with have been easy to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	I am very confident in my abilities to use digital technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9-RC	I find it difficult to get digital technology to do what I want it to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10-RC	At times I find working with digital technology very confusing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	I find it easy to learn how to use a new software package or online application.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12-RC	I seem to waste a lot of time struggling with digital technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13-RC	I always seem to have problems when trying to use digital technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14-RC	Digital technology jargon baffles me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15-RC	Digital technology is far too complicated for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	I consider myself a skilled digital technology user.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17-RC	When using digital technology, I worry I might press the wrong button and damage it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Notes:

Strongly Agree = 4

Agree = 3

Disagree = 2

Strong Disagree = 1

*RC = Reverse Code: Items 2, 3, 4, 5, 6, 9, 10, 12, 13, 14, 15, 17

Calculations: If you use a scale of Strongly Agree (4) to Strong Disagree (1), you will first need to reverse code the items noted above. Then, a total score between 17-68 can be calculated and a mean score between 1-4, with 1 being low digital self-efficacy and a 4 being high digital technology self-efficacy.

This digital technology self-efficacy survey was used in research that was published in the following articles:

Ok, M. W., Hughes, J. E., & Lee, B.-I. (2017). A study of effects of 1:1 laptop computing on pre-service special educators' technology-related knowledge, skills, and attitudes. *The Korean Journal of Early Childhood Special Education* 17(2), 1-21.

Internal reliability, as measured by Cronbach's alpha, of the digital technology self-efficacy measure in Ok et al. (2017) across two response samples were .941 ($n=23$) and .965 ($n=22$).

Hughes, J. E. (2013). Descriptive indicators of future teachers' technology integration in the PK-12 classroom: Trends from a laptop-infused teacher education program. *Journal of Educational Computing Research*, 48(4), 493-518. <https://doi.org/10.2190/ec.48.4.e>

Internal reliability, as measured by Cronbach's alpha, of the digital technology self-efficacy measure in Hughes (2013) across three response samples were .960 ($n=42$), .956 ($n=53$), and .956 ($n=20$).

References

Cassidy, S., & Eachus, P. (2002). Developing the Computer User Self-Efficacy (CUSE) scale: Investigating the relationship between computer self-efficacy, gender, and experience with

computers. *Journal of Educational Computing Research*, 26(2), 133-153.

Holcomb, L., King, F. B., & Brown, S. W. (2004). Student traits and attributes contributing to success in online courses: Evaluation of university online courses. *The Journal of Interactive Online Learning*, 2(3), 1-16.