# Assigning and Assessing Creative and Digital Literacies

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This paper shares data from a professional growth and research project about incorporating Adobe Creative Cloud applications into undergraduate courses across the curriculum. As part of this project, we adapted student learning outcomes from the ISTE Standards for Students and performance criteria and indicators from the AACU Creative Thinking VALUE Rubric, converting them into can-do statements articulating various creative and digital literacies. As part of the study instructors and students reflected upon the can-do statements in relation to their work. Although faculty and students did align on how much multimodal assignments might support students achieving some of the creative and digital literacies, there were also significant differences. This paper shares the various creative and digital literacies both faculty and students perceived as relevant and concludes that faculty should not only provide students with assignment outcomes but also any creative and digital literacy goals.

Plenty of writing studies scholars agree that teaching multimodal composition is important, usually in support of teaching rhetorical concepts (Ryerson, 2016). Undergraduate students, along with companies like Adobe and Canva, argue that instructors across the disciplines should assign multimodal projects as a way to improve their creative and digital literacies (e.g., EDUCAUSE, 2018). Needless to say, just as agreeing upon definitions of rhetoric and rhetorical concepts can be messy, agreeing upon the definitions and descriptions of creative (e.g., Lee & Carpenter, 2015; Miller, 2015) and digital literacies (e.g., Adams Becker, Pasquini, & Zentner, 2017) is a contested arena as well. Even when faculty are provided lists, objectives, or outcomes to help describe, identify, and measure creative and digital literacies, they should map specific literacies to specific multimedia<sup>1</sup> projects and their scaffolded academic modules or units. In other words, what creative and digital literacies are college instructors emphasizing when they assign multimodal projects? What creative and digital literacies do the students assigned those projects think they are learning? This paper shares the results of data collected from faculty

<sup>1</sup> Although the field of Writing Studies tends to privilege the word *multimodal* (Ryerson, 2016), we used *multimodal* and *multimedia* interchangeably with the faculty workshop and study participants.

and students about the creative and digital literacies that are being emphasized in multimodal projects.

#### Context

In Spring 2019, one of the authors was awarded funds from Adobe and the University of Arizona (an Adobe Creative Cloud Campus) to design and deliver workshops to help faculty across the disciplines design and assign multimodal projects. We held workshops in Summer and Fall 2019 and the first half of Spring 2020. We collected implementation and usage data from both faculty and students in Fall 2019 and Spring 2020. One of our research questions was about how both faculty and students understood and experienced the impact of multimedia assignments on their creative and digital literacies.

#### Methods

We collected study data from 11 faculty and 32 students across a variety of disciplines, courses, and course levels. All of the courses that the faculty and students reported and reflected upon were undergraduate level. Faculty developed their own assignments and grading criteria; there was no alignment across the assignments. Faculty also had a variety of different multimodal assignments of which we loosely grouped into video, image editing, and web categories. The image editing assignments (three faculty and eight student participants) included fake social media posts, digital posters, and infographics. The web categories (two faculty and 11 student participants) were predominately websites (esp. eportfolios) and blogs. We grouped the one instructor who assigned an audio, podcasting assignment in the video group (six faculty and 12 student participants). The student participants are not necessarily representative of all of the faculty participants (for example, there are no student participants who completed the podcast assignment, and we have one student participant who mislabeled their instructor and we are unable to connect them with the correct instructor data).

In our IRB approved study, we prompted faculty to complete two surveys. The first faculty survey prompted them to share course and assignment information (e.g., syllabus, assignment prompts); we asked them to rate how much their multimodal assignments would help students with various creative and digital literacies. In the second survey faculty were prompted to reflect upon the implementation of their assignments. We prompted student participants to complete two surveys; one at the end of the term that paralleled the faculty survey in reflecting upon how the multimodal assignments helped creative and digital literacies. They were also sent follow-up surveys to see if they were

still being assigned multimodal assignments in future terms. The survey data explores faculty and student perceptions of the emphasis and engagement with creative and digital literacies.

To develop our list of creative and digital literacies, we adopted and slightly adapted the American Association of Colleges and Universities (AACU, 2022) "Creative Thinking VALUE Rubric" and the International Society for Technology in Education's (ISTE, 2022) "ISTE Standards: Students." In other words, we worked from already developed and vetted learning outcomes instead of trying to construct our own. We adapted them by revising their materials into a list of can-do statements that would be easier for both faculty and students to understand (Table 1 and Table 2). Second language educators have used can-do statements as a method for helping young learners better understand learning objectives so that they might more accurately evaluate their own abilities (Brown, Dewey, & Cox, 2014, p. 264). In short, converting learning outcomes into can-do statements is about making learning outcomes student facing and, hopefully, easier to understand.

In the surveys, faculty and students were asked how much the multimodal assignments helped students achieve each can-do statement:

- Student sentence starter: I feel like the multimedia assignments in this class helped me to...
- Faculty sentence starter: I assigned the multimedia assignments for this class to help students to...

Participants were provided the following options from which to select an answer:

- To an Extremely Large Extent
- To a Large Extent
- To a Moderate Extent
- To a Small Extent
- Not at all

The data shared in this paper focus on the comparisons between the faculty's and students' perceptions of how helpful the multimodal projects were in supporting student improvement of the various creative and digital literacies.

#### Data

Faculty and student participants rated the assignment support of nineteen Creative Literacies Can-Do Statements (Table 1) and twenty-four Digital Literacies Can-Do Statements (Table 2). The results shown in Tables 1 and 2 compare answers across all faculty and all students as well as both groups as broken down by the video, image editing, and web assignment categories.

## **Creative Literacies**

Compared to faculty, students perceived a lot more emphasis across all the creative literacies; at least 50% of student participants claimed the multimedia projects helped them achieve all 19 creative literacies can-do statements (Table 1).

Table 1. Creative Literacies: All Faculty & All Students

Can-Do Statements	Faculty (n=11)	Faculty %	Students (n=32)	Students %
successfully reproduce examples or samples. (AC1)	2	18.18%	20	62.50%
adapt an example or sample to fit the needs of my situation or requirements. (AC2)	1	9.09%	19	59.38%
create an entirely new project, solution, or idea that appropriately addresses a specific problem or situation. (AC3)	7	63.64%	24	75.00%
evaluate my own creative processes and products using project- and context- appropriate criteria. (AC4)	3	27.27%	23	71.88%
try new approaches when completing an assignment or other project. (TR3)	8	72.73%	27	84.38%
$\dots$ to take risks when completing an assignment or other project. (TR4)	8	72.73%	18	56.25%
consider and reject less acceptable approaches to a problem's solution. (SP2)	1	9.09%	18	56.25%
develop a logical, consistent plan while solving a problem. (SP3)	2	18.18%	18	56.25%
$\dots$ articulate the reason for choosing a problem's solution. (SP4)	0	0.00%	17	53.13%
recognize the consequences of my problem's solution. (SP4)	1	9.09%	17	53.13%
identify alternate, divergent, or contradictory perspectives or ideas. (EC1)	4	36.36%	19	59.38%
provide an unbiased explanation of alternative, divergent, or contradictory perspectives in my own projects or solutions. (EC2)	1	9.09%	19	59.38%
consider, critique, and/or adopt alternative, divergent, or contradictory perspectives in my own projects or solutions. (EC3/4)	3	27.27%	21	65.63%

Can-Do Statements	Faculty (n=11)	Faculty %	Students (n=32)	Students %
organize and present a collection of available ideas or solutions. (IT1)	4	36.36%	26	81.25%
recognize existing connections among and across a collection of available ideas or solutions. (CST1)	7	63.64%	19	59.38%
connect ideas or solutions in novel or unique ways. (CST2)	7	63.64%	23	71.88%
analyze and synthesize a collection of available ideas or solutions into a coherent whole. (CST3)	7	63.64%	20	62.50%
create a novel or unique idea, question, format, or product for a specific problem or situation. (IT3/CST4)	7	63.64%	23	71.88%
extend a novel or unique idea, question, format, or product to create new knowledge or knowledge that crosses the boundaries of				
specific problems or situations. (IT4)	7	63.64%	18	56.25%

Note: The data for the table includes both the count and the percentage of participants who answered "To a Large Extent" and "To an Extremely Large Extent" for each of the prompts. Cells that are light green in color include percentages from 50%–74.99% and those in light yellow are 75% or above. The letters and numbers after each can-do statement align with the specific dimension and scale component of the original AACU "Creative Thinking VALUE Rubric."

Over 50% faculty identified eight of the different creative literacies can-do statements, with none of the statements reaching over 75% agreement from the faculty (Table 1). Over 75% of the students rated three of the can-do statements, highlighting the assignments were helping students to:

- create an entirely new project, solution, or idea that appropriately addresses a specific problem or situation (75.00%);
- try new approaches when completing an assignment or other project (84.38%); and
- organize and present a collection of available ideas or solutions (81.25%).

Over 50% of the faculty agreed with the students on multimodal assignment support for creating an entirely new project and trying new approaches; however, only 36.36% of the faculty rated organizing and presenting a collection of ideas as being developed in the multimodal project.

Three of the three faculty who assigned image editing projects perceived the project helped students with five different Creative Literacy Can-Do statements (Table 2).

Table 2. Image Editing Faculty agree on Certain Creative Literacies

Can-Do Statements	Image Editing Faculty (n=3)	Image Editing Faculty %	Image Editing Students (n=8)	Image Editing Students %
try new approaches when completing an assignment or other project. (TR3)	3	100.00%	5	62.50%
to take risks when completing an assignment or other project. (TR4)	3	100.00%	3	37.50%
connect ideas or solutions in novel or unique ways. (CST2)	3	100.00%	4	50.00%
create a novel or unique idea, question, format, or product for a specific problem or situation. (IT3/CST4)	3	100.00%	2	25.00%
extend a novel or unique idea, question, format, or product to create new knowledge or knowledge that crosses the boundaries of specific problems or situations. (IT4)	3	100.00%	1	12.50%

The potential problem arises with the fact that less than 40% of the students agreed that assignments were helpful achieving three of the statements. In total, over 50% of the faculty who assigned image editing rated the assignments helpful towards eight of the statements and 50% of the students found the assignments supporting only seven of the statements. There were only three creative literacies can-do statements that over 50% of both the faculty and the students rated the assignments as supporting students to:

- create an entirely new project, solution, or idea that appropriately addresses a specific problem or situation;
- try new approaches when completing an assignment or other project;
  and
- connect ideas or solutions in novel or unique ways.

There was a bit more alignment between faculty and students who worked with web assignments. 50% of both groups rated the web assignments supporting the same nine Creative Literacy Can-Do statements. And, unlike the disconnect with the faculty emphasizing certain creative literacies with the image editing and the students disagreeing, at least one (50%) of the faculty assigning web projects agreed with the over 75% of the students who rated the web assignments helping to achieve four creative literacies can-do statements (Table 3).

Table 3. Web Assignment Faculty and Students Generally Align on Certain Creative Literacies

Can-Do Statements	Web Faculty (n=2)	Web Faculty %	Web Students (n=11)	Web Students %
try new approaches when completing an assignment or other project. (TR3)	1	50.00%	11	100.00%
organize and present a collection of available ideas or solutions. (IT1)	1	50.00%	9	81.82%
connect ideas or solutions in novel or unique ways. (CST2)	1	50.00%	9	81.82%
create a novel or unique idea, question, format, or product for a specific problem or situation. (IT3/CST4)	1	50.00%	9	81.82%

We see a much larger disconnect with the faculty and students who worked with video assignments. Over 75% of the students rated the video assignment helping achieve every single creative literacies can-do statement, except for "extend a novel or unique idea, question, format, or product to create new knowledge or knoswledge that crosses the boundaries of specific problems or situations;" and, that was still rated highly by 66.67% of the students (Appendix A). Over 50%, none above 75%, of the faculty who assigned video projects only rated the assignment supporting eight of the nineteen creative literacies can-do statements (Appendix A).

Across the four categories of comparative analysis (all faculty and students and then the breakdown of the three assignment types), there are three creative literacies can-do statements that were rated more highly supported by over 50% of both faculty and students, the same three that rated highly for the image editing assignments. Five more creative literacies can-do statements were rated highly, only missed being above 50% in one of the assignment type categories:

- to take risks when completing an assignment or other project;
- recognize existing connections among and across a collection of available ideas or solutions;
- analyze and synthesize a collection of available ideas or solutions into a coherent whole;
- create a novel or unique idea, question, format, or product for a specific problem or situation; and
- extend a novel or unique idea, question, format, or product to create new knowledge or knowledge that crosses the boundaries of specific problems or situations.

Finally, there is one Creative Literacies Can-Do statement that no faculty member rated as supported by the multimodal assignments: articulate the reason for choosing a problem's solution.

# **Digital Literacies**

As with the creative literacies, the student participants were more likely to rate the multimodal assignments helping them achieve the majority of the digital literacies can-do statements (Table 4).

Table 4. Digital Literacies: All Faculty & All Students

Can-Do Statements	All Faculty (n=11)	All Faculty %	All Students (n=32)	All Students %
identify and use technologies to achieve my personal learning goals. (ELa)	3	23.08%	25	80.65%
reflect upon my use of technology to achieve my personal learning goals (ELa)	3	23.08%	20	64.52%
use technology to customize my learning environment. (ELb)	4	30.77%	21	67.74%
use technology to seek feedback that informs and improves my practice and learning. (ELc)	3	23.08%	20	64.52%
choose, use, and troubleshoot current technologies. (ELd)	4	30.77%	21	67.74%
use my current knowledge of technologies to explore new and/or emerging technologies. (ELd)	7	53.85%	22	70.97%
cultivate and manage my digital identity and reputation across various digital technologies and environments. (DCa)	1	7.69%	17	54.84%
engage in positive and safe behavior when using technology, including social interactions online or when using networked devices. (DCb)	3	23.08%	18	58.06%
engage in legal and ethical behavior when using technology, including social interactions online or when using networked devices.	1	7.69%	17	54.84%
(DCb) understand and respect the rights and	1	7.09%	17	34.04%
obligations of using and sharing intellectual property. (DCc)	4	30.77%	17	54.84%

Can-Do Statements	All Faculty (n=11)	All Faculty %	All Students (n=32)	All Students %
manage my personal data to maintain digital privacy and security. (DCd)	1	7.69%	15	48.39%
be aware of data-collection technology used to track my navigation online. (DCd)	0	0.00%	14	45.16%
know and use a deliberate design process for generating ideas, testing theories, creating innovate artifacts or solving problems. (IDa)	1	7.69%	19	61.29%
select and use digital tools to plan and manage a design process. (IDb)	3	23.08%	22	70.97%
evaluate the affordances/strengths and constraints/weaknesses of different options when selecting between technologies. (IDb)	2	15.38%	18	58.06%
develop, test, and refine prototypes as part of a cyclical design process. (IDc)	1	7.69%	12	38.71%
be comfortable with uncertainty or ambiguity during a design and/or problem-solving process. (IDd)	5	38.46%	16	51.61%
persevere through challenges and constraints during a design and/or problem-solving process. (IDd)	6	46.15%	20	64.52%
choose the appropriate digital platforms and technical tools for meeting the goals of a specific problem or situation. (CCa)	4	30.77%	24	77.42%
create original works. (CCb)	8	61.54%	26	83.87%
responsibly repurpose or remix digital resources into new creations. (CCb)	6	46.15%	18	58.06%
communicate complex ideas clearly and effectively by creating or using a variety of digital objects (such as visualizations, models, or simulations). (CCc)	7	53.85%	22	70.97%
publish or present content that adapts the message and medium for a specific audience. (CCd)	7	53.85%	22	70.97%
publish or present content that customizes the message for a specific medium. (CCd)	7	53.85%	23	74.19%

Note: The letters after each Can-Do statement align with the specific category and numbered standard of the original "ISTE Standards: Students."

There were similar parallels in the comparisons across the assignment types. Again, over 50% students completing the video assignments perceived

all of the digital literacies can-do statements, except for "evaluate the affordances/strengths and constraints/weaknesses of different options when selecting between technologies," as being supported by the video assignment (Appendix A). The four digital literacies can-do statements that all three image editing faculty rated the assignments helping, were only rated by just above 50% of the students as helpful (Table 5). Over 75% of the image editing assignment students, however, highly rated assignments supporting four different can-do statements, with two the assignments only emphasized by one faculty member (Table 5).

Table 5. Image Editing Assignment Faculty and Students Somewhat Align on Certain Digital Literacies

Can-Do Statements	Image Editing Faculty (n=3)	Image Editing Faculty %	Image Editing Students (n=8)	Image Editing Students %
identify and use technologies to achieve my personal learning goals. (ELa)	1	33.33%	6	75.00%
use technology to seek feedback that informs and improves my practice and learning. (ELc)	1	33.33%	6	75.00%
choose the appropriate digital platforms and technical tools for meeting the goals of a specific problem or situation. (CCa)	2	66.67%	6	75.00%
create original works. (CCb)	2	66.67%	6	75.00%
responsibly repurpose or remix digital resources into new creations. (CCb)	3	100.00%	4	50.00%
communicate complex ideas clearly and effectively by creating or using a variety of digital objects (such as visualizations, models, or simulations). (CCc)	3	100.00%	4	50.00%
publish or present content that adapts the message and medium for a specific audience. (CCd)	3	100.00%	5	62.50%
publish or present content that customizes the message for a specific medium. (CCd)	3	100.00%	4	50.00%

The web assignment faculty and students were also similarly mis-matched in their alignment across the various statements.

When comparing results from all students and faculty across all four comparison categories, there were four digital literacies can-do statements over 50% agreed that the multimodal assignments supported students to:

- create original works;
- communicate complex ideas clearly and effectively by creating or using a variety of digital objects (such as visualizations, models, or simulations);
- publish or present content that adapts the message and medium for a specific audience; and
- publish or present content that customizes the message for a specific medium.

Except in one category group, over 50% of participants across the comparison categories found multimodal assignments helping students to:

- use my current knowledge of technologies to explore new and/or emerging technologies; and
- persevere through challenges and constraints during a design and/or problem-solving process.

Finally, no faculty member rated multimodal projects as helping students "be aware of data-collection technology used to track my navigation online."

### Discussion

This study provides us with a list of creative and digital literacies that both the faculty and student participants found being supported while assigning and completing multimodal assignments. Obviously this is a small number of faculty and student participants, therefore, it is inappropriate to generalize based on this data (especially in relation to claims about the importance of specific literacy descriptions and statements). However, there are still some useful takeaways:

- 1. Multimedia assignment prompts need to include learning outcomes, or goals, for both content as well as creative and digital literacies.
- When working on video assignments students feel their creative and digital literacies are greatly taxed and expanded; faculty need to acknowledge and account for students' perceptions.
- 3. Faculty appear to undervalue the critical thinking work associated with creative projects.
- 4. Faculty do not appear to take responsibility for the legal, ethical, and security issues associated with working in digital environments.

Three of these takeaways assume some changes faculty might make when assigning multimedia projects.

First, the results of this data emphasize the need for faculty to explicitly articulate the learning objectives and goals for their assignments. And whereas

most instructional design practitioners and many pedagogy scholars emphasize that instructors need to clearly articulate learning objectives for assignments, this study demonstrates that instructors might also want to identify learning goals as well. Identifying goals that are above and beyond the course content, like creative and digital literacies, can be difficult (Jahnke, Haertel, & Wildt, 2017). Therefore, if we argue that we should assign multimodal projects to help students develop creative and digital literacies, instructors who assign multimodal projects should help students understand the importance, or lack thereof, of specific creative and digital literacies emphasized, taught, or assumed in a given assignment. Fodrey and Mikovits (2020) suggested similar ideas about prompting faculty to understand and think about genre and discourse community when they facilitated a WAC workshop that promoted designing multimodal projects. Asking faculty to articulate assignment objectives above and beyond the content related ones, like rhetorical, creative, and digital literacies, especially what students will be held accountable upon assessment of the project, will help students better target their efforts and labor.

Second, emphasizing specific creative and digital literacies is especially important with video assignments. Students made clear that working on video assignments pushed their learning across a wide variety of both creative and digital literacies (Appendix A). Faculty assigning videos should take this into account while planning for student workload and anxiety associated with a video assignment. Students are surrounded by examples of professional, highly polished, and amateur video production quality. It is ethically problematic to not explicitly articulate expectations, specifically learning and assessment criteria, especially with students who have little to no video production experience.

Third, it appears that faculty do not think working with multiple media supports students' critical and creative thinking. Of all the creative literacy can-do statements, zero or only one faculty participant emphasized had to do with selecting, testing, choosing, appropriate solutions or answers from multiple perspectives (Table 1). Even one of the digital literacy can-do statements only emphasized by one faculty member also prompted using "a deliberate design process for ... solving problems" (Table 4). We imagine one reason this lack of emphasis on the critical engagement with the projects' content might be because many faculty, especially those new to assignment multimedia projects, develop remix assignments (e.g., Seeley, 2020). If this is the case, many faculty might believe the critical and creative thinking associated with the content is already happening in the alphabetic text assignment and the remix prompt is just repackaging the students' thinking.

Finally, no faculty emphasized that their assignments helped students to "be aware of data-collection technology used to track navigation online." Except for the design process can-do statement mentioned above, the other

digital literacy can-do statements only one faculty member identified as emphasized in their projects connected to issues around digital ethics, privacy, and security. Even the can-do statement that emphasized digital ethics, articulated that issue in relation to students engaging in "social interactions online or when using networked devices." Although legal scholar and privacy expert Solove (2021) argues that it is impossible for individuals to take responsibility for managing their own digital privacy, he does claim that institutions do need to take responsibility. And, we'd argue, instructors are representative of the educational institution and should try to help educate and facilitate students' privacy and security while working on required assignments. Especially if multimedia assignments prompt students to use technologies not vetted through an institution's legal team, helping students manage their digital privacy is critical. Campus instructional designers or educational technologists should be able to help faculty with this issue.

Being more explicit with students about the creative and digital literacies being emphasized in any one assignment is a relatively easy fix for a faculty member. Although constructing assignments that more explicitly teach and protect students' privacy in digital environments might take more work, it's the right thing to do and many campuses have assigned faculty and staff with the knowledge to help.

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# **Appendix A: Video Assignments**

Can-Do Statements	Video Faculty (n=6)	Video Faculty %	Video Students (n=12)	Video Students %
Creative Literacies				_
successfully reproduce examples or samples. (AC1)	2	33.33%	9	75.00%
adapt an example or sample to fit the needs of my situation or requirements. (AC2)	0	0.00%	10	83.33%
create an entirely new project, solution, or idea that appropriately addresses a specific problem or situation. (AC3)	4	66.67%	11	91.67%
evaluate my own creative processes and products using project- and context- appropriate criteria. (AC4)	2	33.33%	10	83.33%
try new approaches when completing an assignment or other project. (TR3)	4	66.67%	10	83.33%
to take risks when completing an assignment or other project. (TR4)	4	66.67%	9	75.00%
consider and reject less acceptable approaches to a problem's solution. (SP2)	0	0.00%	9	75.00%
develop a logical, consistent plan while solving a problem. (SP3)	0	0.00%	10	83.33%
articulate the reason for choosing a prob- lem's solution. (SP4)	0	0.00%	10	83.33%
recognize the consequences of my problem's solution. (SP4)	0	0.00%	10	83.33%

	371	37.1	371	T7: 1
	Video Faculty	Video Faculty	Video Students	Video Students
Can-Do Statements	(n=6)	%	(n=12)	%
identify alternate, divergent, or contradicto-				
ry perspectives or ideas. (EC1)	2	33.33%	10	83.33%
provide an unbiased explanation of alternative, divergent, or contradictory perspectives				
in my own projects or solutions. (EC2)	1	16.67%	11	91.67%
consider, critique, and/or adopt alternative,				
divergent, or contradictory perspectives in my				
own projects or solutions. (EC3/4)	2	33.33%	11	91.67%
organize and present a collection of avail-	2	22.220/		01 (50/
able ideas or solutions. (IT1) recognize existing connections among and	2	33.33%	11	91.67%
across a collection of available ideas or solu-				
tions. (CST1)	4	66.67%	9	75.00%
connect ideas or solutions in novel or unique ways. (CST2)	3	50.00%	9	75.00%
analyze and synthesize a collection of avail-	3	30.0070		73.0070
able ideas or solutions into a coherent whole.				
(CST3)	4	66.67%	10	83.33%
create a novel or unique idea, question, format, or product for a specific problem or				
situation. (IT3/CST4)	3	50.00%	11	91.67%
extend a novel or unique idea, question, format, or product to create new knowledge				
or knowledge that crosses the boundaries of				
specific problems or situations. (IT4)	3	50.00%	8	66.67%
Digital Literacies				
identify and use technologies to achieve my		22.220/	4.0	00.000/
personal learning goals. (ELa)	2	33.33%	10	83.33%
reflect upon my use of technology to achieve my personal learning goals (ELa)	3	50.00%	9	75.00%
use technology to customize my learning	3	30.0070		73.0070
environment. (ELb)	2	33.33%	8	66.67%
use technology to seek feedback that in-				
forms and improves my practice and learning. (ELc)	3	50.00%	9	75.00%
choose, use, and troubleshoot current tech-				
nologies. (ELd)	4	66.67%	9	75.00%
use my current knowledge of technologies to explore new and/or emerging technologies.				
(ELd)	6	100.00%	10	83.33%

	Video Faculty	Video Faculty	Video Students	Video Students
Can-Do Statements	(n=6)	%	(n=12)	%
cultivate and manage my digital identity and reputation across various digital technologies and environments. (DCa) engage in positive and safe behavior when using technology, including social interactions	1	16.67%	8	66.67%
online or when using networked devices. (DCb)	2	33.33%	9	75.00%
engage in legal and ethical behavior when using technology, including social interactions online or when using networked devices. (DCb)	1	16.67%	8	66.67%
understand and respect the rights and obligations of using and sharing intellectual property. (DCc)	3	50.00%	10	83.33%
manage my personal data to maintain digital privacy and security. (DCd)	1	16.67%	8	66.67%
be aware of data-collection technology used to track my navigation online. (DCd)	0	0.00%	7	58.33%
know and use a deliberate design process for generating ideas, testing theories, creating innovate artifacts or solving problems. (IDa)	0	0.00%	6	50.00%
select and use digital tools to plan and manage a design process. (IDb) evaluate the affordances/strengths and con-	2	33.33%	8	66.67%
straints/weaknesses of different options when selecting between technologies. (IDb)	1	16.67%	5	41.67%
develop, test, and refine prototypes as part of a cyclical design process. (IDc)	0	0.00%	6	50.00%
be comfortable with uncertainty or ambiguity during a design and/or problem-solving process. (IDd)	3	50.00%	6	50.00%
persevere through challenges and con- straints during a design and/or problem-solv- ing process. (IDd)	4	66.67%	7	58.33%
choose the appropriate digital platforms and technical tools for meeting the goals of a specific problem or situation. (CCa)	1	16.67%	10	83.33%
create original works. (CCb)	6	100.00%	10	83.33%
responsibly repurpose or remix digital resources into new creations. (CCb)	4	66.67%	7	58.33%

Can-Do Statements	Video Faculty (n=6)	Video Faculty %	Video Students (n=12)	Video Students %
communicate complex ideas clearly and				
effectively by creating or using a variety of				
digital objects (such as visualizations, models,				
or simulations). (CCc)	5	83.33%	9	75.00%
publish or present content that adapts the message and medium for a specific audience.				
(CCd)	4	66.67%	8	66.67%
publish or present content that customizes				
the message for a specific medium. (CCd)	4	66.67%	11	91.67%