Visual Literacy and COVID-19:

Online Representations Connecting Learning and Impacting Teaching

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Introduction

Since March 2020, everyone's worldview and experiences have changed due to the COVID-19 pandemic. An already visual-rich online environment has been inundated by images, from charts to photographs, depicting changes in people's lives due to a prolonged bout with an invisible enemy. Being cooped at home with nowhere to go and teaching remotely, the researchers ventured into studying what their students considered and shared in their classes online as part of the visual journaling activity. The paper explores how the changing online visual landscape as a phenomenon connects to learning and teaching contexts.

Activity

Starting with Summer 2020, the researchers collected artifacts submitted by students in a visual and media literacy course. The artifacts allowed the students to complete a journaling assignment identified as a visual-based reflection. For the task, the professor asked students to post a visual aligned to a prompt. They also wrote an accompanying narrative as a response to a prompt. Students post their visual and written responses in a designated online discussion "space." Most of the visuals came from websites, online news, or social media postings.

Given that the students study visual and media literacy as a discipline, the prompts asked students to provide a brief narrative on what they see in alignment with course-related content. The writing entries focus on students' thinking of the relationship between the shared image and visual or media literacy concepts, such as visual or design elements, principles, compositions, and angles of a camera shot).

Element

Visual design elements refer to the basic units of visual communication (Hagen & Golombisky, 2013). Examples of visual or design elements include line, color, space, shape/form, size/scale, texture, and value.

Principle

Visual or design principles facilitate the creation of an aesthetic appeal. The principles guide the work and interact with each other to maximize the user experience. Though there are no definite principles, researchers and practitioners identified some as focal point/emphasis, rhythm/pattern, balance, movement, contrast, repetition, alignment, proximity, and unity (Hagen & Golombisky, 2013).

Composition

Researchers and practitioners identified visual or design composition style as "the arrangement of elements within a design" (Brown, Bussert, Hattwig, & Medaille, 2016, p.77). A typical composition technique is the rule of thirds. Other composition styles include leading lines, diagonal lines, framing, figure vs. ground, fill the frame, dominant eyes, and symmetry.

Camera Angle

The camera angle refers to how one composes a shot given the location of a camera about the subject. Researchers and practitioners classified the camera shot angle as eye-level (front or back of the object), high angle (top), low angle (bottom), or slanted (right or left). Using different camera angles to take a shot can provide different experiences for the viewer that may elicit an emotion.

Visual Sharing Prompts

To identify an image for the activity, students need an image that communicates or aligns with the prompts. Six descriptive statements provided the students with a focus for their visual sharing activity:

1. An image of an opening event at your school (if you are not in a school, then your children's school).
2. An image of the management of the pandemic in your community. Provide a narrative reflection demonstrating the pandemic impacts on you or your family.
3. A cartoon from online websites or social media that serves as commentary to the current political situation in the United States.
4. An image that serves as a commentary on the current health situation in the United States.
5. An image of children or young adults managing the daily challenges of living in a pandemic.
6. An image that portrays positivity given the current situation (health, political, social, economics).

Inquiry

For the initial study of the visual artifacts, the researchers chose to collect and analyze the submissions from the first two prompts. Since the students study visual and media literacy, the

researchers wanted to know if image selection for sharing followed a pattern or theme. The researchers decided to focus on the following questions as part of the inquiry:

1. What visual or design elements or principles are the students connecting within their journal entries on each topic?
2. What strategies on visual or design composition styles and camera shot angles that the students connect within their journal entries on each topic?
3. How did the students represent the impact of COVID-19 on teaching?

Visual Coding and Analysis

The researchers performed a "close" review of each image using the four visual or media literacy concepts specifically for pictures or photographs. The researchers collected 48 images for prompt #1 and 42 for #2. Some students submitted a photo for only one prompt. The researchers decided not to include them in the study. Also, the researchers did not include images with embedded texts or cartoons. The final image count for the study numbered 26 for each prompt.

Once the researchers determined the images for analysis in the study, they coded them for the presence of a visual or design element and principle. Also, they identified the primary visual or design composition style and angle of the camera shot. After coding all the images, the researcher identified high frequencies in each category to answer the research questions.

Findings

Several patterns and themes emerged after analyzing the codes generated by the review of images in the four categories (i.e., elements, principles, compositions, angles). Table 1 identified those with the highest frequencies in each visual design category.

Table 1

	Prompt #1		**Prompt #2**		**Total**	
Element	**N = 25**	***f***	**N = 25**	***f***	**N = 50**	***f***
1. Space	23	0.92	17	0.60	40	0.80
2. Color	14	0.56	23	0.92	37	0.74
3. Line	17	0.60	16	0.64	33	0.66
Principle	**N = 25**	***f***	**N = 25**	***f***	**N = 50**	***f***
1. Repetition	16	0.64	13	0.52	29	0.58
2. Focal Point/ Emphasis	14	0.56	14	0.56	28	0.56
3. Contrast	21	0.84	6	0.20	27	0.54
4. Alignment	14	0.56	11	0.44	25	0.50
Composition	**N = 25**	***f***	**N = 25**	***f***	**N = 50**	***f***
1. Patterns & Repetition	11	0.44	11	0.44	22	0.44
2. Rule of Thirds	8	0.32	8	0.32	16	0.32

3. Leading Lines	9	0.36	4	0.16	13	0.26
4. Figure vs. Ground	8	0.32	4	0.16	12	0.24
Camera Angle	**N = 25**	***f***	**N = 25**	***f***	**N = 50**	***f***
1. Right	8	0.32	15	0.60	23	0.46
2. Front	10	0.40	3	0.12	13	0.26

Elements

The students submitted images that demonstrated elements of space, color, and line. These elements emerged as most common amongst student selections. The researchers coded the collected pictures based on these three elements and shape/form, size/scale, texture, and value. An example of an image from the study evidencing all three of these elements is displayed below (see Figure 2).

Figure 2. An example of an image with space, color, and line.

Principles

The researchers coded the collected images using the category of visual design principles. After analyzing the coded images, the researchers identified repetition, focal point/emphasis, contrast, and alignment. See an example of a student-selected image demonstrating the visual design principle of repetition below (See Figure 3).

Figure 3. An example of the principle of repetition

Composition Styles

The researchers identified nine visual design composition styles to facilitate coding the collected images. After analyzing the codes on composition styles, the researchers found patterns and repetition, the rule of thirds, leading lines, and figure vs. ground, are highly evident. Below is an example of figure vs. ground composition style (see Figure 4).

Figure 4. An example of figure vs. ground composition

Camera Angles

Finally, the researchers coded for angles of the camera shot among the collected images. The images selected and shared by students demonstrated camera shots taken using right or front angles. Below is an example of one of the images taken from a right angle (see Figure 5).

Figure 5. An example of a right angle shot of an image selected by a participant

Connection to Teaching and Learning

The pandemic impacted school activities at different levels. The pictures below (see Figure 6) demonstrate how COVID-19 changed how teachers and children worked together. The most common evidence of these changes is seen in these visual representations from using masks, teaching remotely, practicing social distance, checking temperatures, restructuring classroom space, and disinfecting hands. Masks became the new accessories in children's clothing for school. Teaching remotely became normal in conducting classes that challenged teaching practices for many teachers. If there is onsite teaching, then school staff rearrange desks, tables, and chairs to demonstrate social distancing and restructuring learning spaces. Finally, temperature checks and handwashing with disinfectants became the norms of everyday behaviors in some schools.

Figure 6. Visual representation of COVID-19 impact on teaching and learning.

Challenges

The researchers based the study on the output generated by a course activity. The activity asked students to reflect on the visual or design concepts learned and demonstrated the content visually.

The first challenge that the researchers encountered involved understanding the student engagement and performance with the activity. The research explored the type of images submitted, and the researchers analyzed the visual or design characteristics. However, given the study's exploratory nature, the researchers began to think that the images' exploration as a research study needs reconceptualization towards a scholarship on teaching and learning.

Another challenge the researchers experienced was the volume of data (both images and texts) available for analysis. The project started with over 40 pictures to code and decided to reduce the number to a more manageable number of 25 images. The researchers reduced the number of images in two ways. Initially, the researchers eliminated duplicate pictures submitted by students. For example, three students presented the same photo of a crowded hallway for their opening day prompt. The researchers analyzed the image once and removed the duplicates. Then, the researchers eliminated any picture that was not a photograph or with embedded text. In this manner, the researchers did not include political cartoons, infographics, and other non-photographic images.

The data collection also included narratives written about the image by the students. The researchers decided not to code these narratives but focused on the images as the primary data source. The researchers chose to analyze the descriptions at a future date. They prioritize studying the images to facilitate understanding the context of what made students select the photos, and how they connected the images to teaching and learning, and the impact of COVID on those activities.

Lessons learned

Three significant lessons emerged from the research experience. First, a coding framework for classifying and categorizing the data around visual literacy components is beneficial. Next, similarities and differences could emerge between and among the images. Finally, previous experience with visual literacy played a vital role in data analysis.

First, the researchers learned that a coding framework greatly aided the ability to classify and categorize data. They developed a coding framework around visual literacy components such as the elements, principles, composition styles, and angles of camera shots. The coding framework greatly assisted the junior researcher's ability to identify and code the images.

Second, the researchers identified similarities and differences among and between images. For example, using the category of camera angles, the researchers found that students submitted many pictures taken from a front or right angle. The results did not surprise the researchers, given their experiences in taking photographs since many individuals choose to shoot photos due to being right-handed.

Third, the researchers found that experience and exposure to visual literacy concepts make a difference when analyzing photographs. Each researcher coded 25 images, but the amount of time taken by each researcher differed drastically based on personal experiences. The researcher with expertise in visual literacy coded the collected data in a shorter time, while the second took more time due to less familiarity with the content knowledge. The finding spoke to the need for training coders.

Future actions

The next step for the researchers will be to continue analyzing the collected images as data. The students received six prompts to respond to over the semester. The researchers analyzed the data from the first two prompts for this paper. They need to analyze the responses to the remaining prompts to understand the emerging patterns and themes in alignment with the content learned by the students.

Another action needs to focus on analyzing the narrative portions of the students' visual journal entries. Since each student responded to all prompts with images and narratives, the researchers also needed to code and analyzed them.

After analyzing the images based on the visual or design categories, the researchers found that the students need more training on developing visual literacy knowledge and skills. Also, the researchers realized the importance of providing a tutorial on how to code images for consistency when using multiple coders.

Finally, the researchers would endeavor to connect the information and experience gleaned from this study to teaching media literacy.

References

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