

## Thematic Construction of Digital Visual Arts: Implications for Digital Pedagogy

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**Abstract:** This paper attempts to describe the signifier choice of student artists in thematic representations of digital visual arts and determine its implications for digital pedagogy. Utilising a qualitative approach to research and covering a corpus of six digital artworks of student artists, the semiotic analysis utilising Peirce's (1991) sign modes showed the student artists' preference for mostly indexical and symbolic signifiers in thematic representations of Filipinos' resiliency to the pandemic. This signifier choice of student artists was influenced by their experience, family, self, other artists, and their initiatives for finding information and drawing inspiration from online sources, as revealed in the conducted Focus Group Discussion (FGD) with the participants. Moreover, the individual interviews with the participants demonstrated that the student artists' choice of signifiers served as a vehicle for expression, representation, and impression of ideas, themes, and abstractions dominating their artworks. This study calls for the integration of digital artmaking tools into pedagogy to provide opportunities for artistic expression and support diverse representation. Teachers can introduce various digital tools and platforms, create assignments that encourage creative experimentation, and foster a safe and inclusive classroom environment. Future research could explore the practical applications of digital pedagogy in visual arts education.

**Keywords:** signs, student artists, thematic representation.

### Introduction

Digital arts occupy a crucial role in enhancing students' digital literacy while enabling them to acquire essential skills and learning through open and distance education. Within this digital pedagogy, the integration of digital arts into education has become increasingly important as it offers numerous benefits for students (González-Zamar & Abad-Segura, 2021). Digital art tools and technologies have the potential to engage students in learning and help them develop the skills that are necessary for them to participate effectively in digital society. With the rise of open and distance learning, digital arts can be used to enhance students' engagement and learning experiences, which could bridge the digital divide, especially in developing countries. By incorporating digital arts into the learning process, students can become familiar with digital tools and technologies that can capacitate them to be more digitally literate. This familiarisation with digital tools can help them acquire the skills necessary to participate in digital economies and societies (González-Zamar et al., 2020). Hence, the integration of digital arts into open and distance learning could play a vital role in enhancing digital literacy and promoting economic and social development.



Digital arts have also emerged as a primary media for artistic expression as artists have shifted to various social media platforms in showcasing their visual arts. With the generation of young artists who are digital natives, contemporary visual arts are likely to be produced and enhanced digitally as artists explore a wide array of illustrator and photo editing tools to communicate messages through their respective artworks. Educators have also recognised the importance of digital tools in fostering learners' creativity and, thus, becoming prevalent in modern-day art education (Boyland, 2021). These computer-mediated arts have also become mainstream in school visual arts competitions, as the utilisation of different digital tools enhances students' artistic expression while honing their critical thinking and stimulating their skills (Gökçearslan et al., 2019).

While the benefits of the art-making process utilising digital tools to students have become widely acknowledged by educators, appreciation of themes conveyed by digital visual arts still heavily relies on the subjective perception of these arts as end products carrying meanings represented by their graphical elements rather than by drawing attention to the intricate art-making process. This common practice of art appreciation provides a minimal understanding of the artists as part, or essential, elements of their artworks.

Current and available studies consider digital arts as the final product by capitalising on their aesthetics and meanings. Li (2022) and Bo et al. (2018) ventured to develop computational methods for understanding the meaning and evaluating the artistry of digital arts using both machine and deep learning techniques. Meanwhile, Kovalova et al. (2022) view this art medium as a form of post-modern art challenging the traditional notions and practices of interpretation and aesthetics. This focus on meanings and aesthetics provides limited opportunity for exploration of the complexity in which digital artists craft their artwork.

Despite this limited exploration of the intricacies of the digital art-making process, scholars are becoming interested in understanding the numerous processes engaged in by digital artists and their implications for pedagogy. González-Zamar and Abad-Segura (2021) and Tusiime et al. (2020) rationalised the need to deepen the understanding of educators about the complex digital art-making process to develop effective teaching strategies that could guide students in exploring this digital art media. Likewise, Welch (2021) argues the importance of considering artists' experiences and unique attempts in communicating messages to comprehensively make sense of their respective artworks. Within the context of digital pedagogy, it is essential to acknowledge that the perception and appreciation of digital arts extend beyond the end products. It is equally crucial to appreciate the complex art-making process that constitutes the artists' attempt to visually represent the themes they intend to deliver through their artworks. This intricate art-making process includes the artists' choice of graphical elements or signifiers in communicating their ideas and intended messages. This acknowledgment of the intricate art-making process can lead to the recognition of the potential benefits of incorporating digital art education into pedagogy, such as enhancing the learning experience and improving students' critical thinking and creativity.

In understanding the complex digital artmaking of student artists, educators can explore the artists' attempts in carefully selecting and illustrating graphical elements in constructing themes they intend to convey. This exploration entails an individual familiarity with visual signifiers. Visual signifiers, according to Bradley (2016), are signs that usually take various forms such as words, numbers, graphics, and the like, which artists use to encode messages to construct themes of their artworks. The clarity of themes constructed in visual artworks is affected by the intricacy of the sign type of each graphical element used in representing ideas that can help in the

construction of themes of graphical art. Student artists may opt to use iconic graphical elements directly illustrating the concepts they want to showcase, indexical images, which make use of the association of graphics to the construct they represent, and symbolic signs that are arbitrary to the ideas they project (Bradley, 2016). Knowledge of how student artists construct themes of their artworks through carefully considering the sign types of the graphical element they illustrate in conveying ideas can lead to a better understanding of the intricate digital artmaking and appreciation of this emerging visual art media and, therefore, has significant implications for digital pedagogy. By understanding the thought processes and techniques used by student artists in creating their digital artworks, educators can design effective and engaging pedagogical strategies that foster creativity, critical thinking, and digital literacy skills in students. By also encouraging students to consider the sign types of graphical elements in their art, educators can help them develop a deeper understanding of how meaning is conveyed through digital media, enabling them to create and appreciate more sophisticated and compelling visual narratives.

This study attempted to explore student artists' signifier choice in the thematic construction of visual arts and its implications for digital pedagogy. It distinguished the sign types used by student artists in communicating the meanings or signified the graphical elements or signifiers of their respective visual arts. It then explored student artists' drivers and functions of their choice of signifiers in conveying themes of digital graphic arts. It also determined the implications for digital pedagogy of the student artists' signifier choice in the thematic construction of visual arts.

## **Theoretical Framework**

This study is anchored on semiotics in which meanings of discrete images are considered to be created through considering their elements, which Ferdinand de Saussure, a Swiss linguist, termed as signifiers and signified (Silverman & Rader, 2018). This signification involves the actual graphical element or the signifier and the message it carries or the signified. The meaning created when a signified was taken together with its signifier depends largely on decoders or experiential and cultural knowledge. In the same way, student artists' choice of signifiers heavily relies on the common experiential and cultural knowledge they embed in their graphical representation to communicate ideas or concepts.

The meaning created between the signified and signifier is influenced by the sign type associated with these elements. Charles Peirce, an American philosopher, distinguishes the types of signs into iconic, indexical, and symbolic signs (Mesthrie et al., 2009). A graphical element can be considered an icon when its message or signified replicates the actual characteristics of this concrete graphical representation, e.g., a photograph of a cat to represent a cat. Meanwhile, graphics can be classified as an index when their message correlates to or is in a logical association, such as a cause-and-effect relationship, with the image, e.g., a pile of wood with smoke to connote fire. On the other hand, visual representation can be a symbol when its signifier involves an arbitrary relationship with its signified such as in the case of three stars and a sun to symbolise the Philippines. Among these sign types, student artists may choose appropriate signifier-signified relations to communicate messages considering their experiential and cultural knowledge in their graphical representations to construct themes of digital visual arts.

## **Methods**

### **Research Design**

The study utilised qualitative research design in describing the student artists' signifier choice in the thematic construction of digital visual arts. Creswell and Poth (2018) characterise this research design as an inquiry into understanding the meaning of the participants' perspectives through in-depth data collection involving documentary analysis and interview. Within the scope of the study, this in-depth collection of data centred on the documentary analysis of a collection of digital visual arts by student artists and their perspectives on digital artmaking through individual interviews and Focus Group Discussion (FGD) to understand their choice of graphical elements in representing the theme of their digital artworks. This research made use of the text data derived from the semiotic analysis of a corpus of digital visual arts and the thematic analysis of transcripts from the conducted FGD and individual interviews with the participants, who were student artists.

### **Participants**

The study utilised the purposive sampling method in determining the participants. The purposive sampling method involves selecting participants based on specific characteristics relevant to the research objectives (Creswell & Creswell, 2018). Since the study dealt with understanding digital artmaking as a phenomenon involving student artists' choice of graphical elements in representing themes in digital arts, six student artists, who competed in the Multi-media Arts Competition of a Southern Tagalog state university in the Philippines, were considered participants in the study. These participants were purposively chosen as they had engaged in digital visual arts in graphically presenting the theme of the 2020 Philippine National Language Month celebration, hence, they had provided reliable data about their signifier choice in the thematic construction of digital visual arts. This homogenous sample of the participants, who had provided their consent to partake in the study, represented the entire number of student artists involved in digital visual arts during the mentioned competition in the specified research locale, thus, the researcher deemed this sample sufficient for the study.

### **Materials**

This research analysed a corpus of six digital visual arts by student artists representing the six colleges of a constituent campus of a Southern Tagalog state university in the Philippines. These six digital visual arts were entries for the Multi-media Arts Competition during the 2020 celebration of the Philippine National Language Month with the theme, *Language of History, History of Language: The Indigenous Languages for Philippine Unity Against Pandemic*. The student artists who created these digital visual arts granted their permission to include their digital artworks as part of the study's corpus and provided their consent to participate in the study.

## **Data Collection**

### **Corpus Construction**

A corpus of six digital visual arts that had been entries in the Multi-media Arts Competition was semiotically examined to generate the text data needed in describing the student artists' signifier choice in visually presenting the theme of the 2020 Philippine National Language Month celebration. The graphical elements in each digital visual art were identified and textually described to represent the individual signifier of each textual description. A total of 61 textual descriptions of the graphical elements in the corpus of six digital visual arts were identified and

subjected to semiotic analysis to describe the student artists' signifier choice in the thematic construction of digital visual arts.

### **Focus Group Discussion**

The researcher facilitated a focus group discussion (FGD) with the six student artists who illustrated the analysed digital visual arts. Through roundtable discussion, these student artists were asked about the drivers, which influenced their choice of signifiers in the thematic construction of their visual arts. Their responses were transcribed for analysis. The transcriptions underwent interpretive phenomenological analysis (IPA) to capture the inspirations from which their signifier choice was derived.

### **Interview**

Individual interviews with the student artists was also conducted to further identify the functions of their signifier choice. With the help of prepared guide questions, the researcher identified the functions played by the signifiers illustrated by student artists in constructing the themes of their digital visual arts. Transcripts were also made from the responses of each student artist in the prepared guide questions. These responses also underwent IPA analysis to clarify the functions played by student artists' choice of signifiers. The various methods utilised by the researcher helped in encapsulating the intricacy of digital artmaking of student artists.

## **Data Analysis**

### **Semiotic Analysis**

This study made use of semiotic analysis in distinguishing the signifier choice of student artists in the thematic construction of digital visual arts. A corpus of six digital visual arts by student artists was analysed considering Ferdinand de Saussure's (1966) notion of signifiers and signified. Graphical elements constituting each visual art were identified to closely examine the message carried by each graphical representation, which was then affirmed by the identified student artist as the creator of the specific graphical representation. This affirmation of the message carried by the individual graphical element of its creator enabled the researcher to accurately draw the signified of each of the signifiers constituting the individual digital visual art. After drawing the signified, each signifier or graphical element was categorised according to Charles Peirce's (1991) sign types. Through examining the relation of signified with its signifiers, each graphical element was categorised into icon, index, or symbol, revealing the prevalence of the sign types used by student artists in the thematic construction of their respective digital visual arts.

### **Interpretive Phenomenological Analysis**

The text data generated from the conducted focus group discussion (FGD) and the individual interview with the participants were subjected to interpretive phenomenological analysis (IPA). IPA requires a detailed examination of participants' experiences by subjecting the text data obtained from an interview or FGD to thematic analysis to identify common patterns within the collected qualitative data (Smith & Osborn, 2020). This approach to analysing text data was used in the study to examine the beliefs valued by the participants in making their choice of graphical elements in representing the themes of their digital visual arts. This analysis is conducted to offer insights into the drivers that influenced student artists' signifier choice in the thematic construction of digital visual arts and the perceived functions of each signifier embedded in their graphical artworks. The text data were transcribed and thematically analysed by drawing the themes and subthemes prevailing in the data to reveal the drivers influencing the student artists' choice of signifiers and the perceived function of each signifier.

## Results

### Sign Types Prevailing Among the Signifiers in Constructing Theme of Graphic Arts

A total of 61 graphical elements were identified among the corpus of six graphic arts by student artists in constructing the theme provided during the graphic arts competition. The sign types prevailing among the graphical elements of the corpus of graphic arts are illustrated in Table 1.

**Table 1: Sign Types Prevailing among the Signifiers in Constructing Themes of Graphic Arts.**

Signifier	Signified	Sign	Thematic Construction
1. Covid-19 [3]	Covid-19	Iconic	<i>Language of History, History of Language: The Indigenous Languages for Philippine Unity Against Pandemic</i>
2. Person eating healthy food	Person eating healthy food		
3. Doctors and nurses wearing face masks and face shields	Frontliners		
4. Group of houses with trees beside	Community		
5. Pedestrian lane	Pedestrian lane		
6. Road sign	Road sign		
7. Hospital [2]	Hospital		
8. Road	Road		
9. Health supplies and equipment: soap, alcohol [3], thermometer, and water from faucet	Safety and protection Awareness	Indexical	
10. Police officer wearing facemask [2]			
11. Nurse looking back while holding her facemask			
12. Frontliner [2] wearing an armor, holding a megaphone, and holding an alcohol with x letter			
13. A man that covers his ears and wears a face mask			
14. health worker with placard, "manatili sa bahay (stay at home)."			
15. Family watching news report			
16. Stay at home sign			
17. Quarantine sign and people wearing face mask			
18. Ascending arrow left labeled with economics			
19. Bills			
20. Cellphone			
21. Man working with communication technologies			
22. Driver wearing facemask			
23. Jeepney and tricycle vehicles			
24. Janitor wearing facemask with alcohol spray			
25. Two men working with a carabao			
26. People in their different professions walk.			
27. Kneeling while praying man	Spirituality, positivism, and resiliency		
28. Praying lady in silhouette			
29. Child happily playing hopscotch			
30. Sun			
31. Trees and building			
32. Birds			
33. A gamer student casting spell			

34. Student wearing facemask holding office pen and paper	Education and literacy	
35. Student happily reading book on Language of History		
36. Piece of paper with A, BA, KA, DA	Filipinism and national identity	
37. Man with salakot		
38. Old woman wearing a facemask with pseudo baybayin symbol		
39. A young girl holding the Philippine flag		
40. Rizal, Bonifacio, Lapu-lapu, Jaena		
41. Four people looking straight ahead wearing flag colored shirt		
42. Indigenous tribes		
43. Baybayin syllables (ya, ba, o, da, ka, ngo, la, lu, ya, yo, a) written on a colored paper	Division	
44. White curtain		
45. Earth surrounded by the Philippine flag gradient with word spelled baybayin	Peace and unity	
46. People shaking hands		
47. Emblem		
48. Hand with Covid-19 Advisory and golden hand with Baybayin, "Pag-asa" are linked together		
49. Group of people wearing face masks making bayanihan with the Nipa hut		
50. Philippine flag gradient [2]		
51. Philippine flag with Tagalog words "KALAYAAN" and words spelled in Baybayin		Nationalism and patriotism
52. Philippine flag-colored human gripping Fist		
53. Yellow, black and blue tiled background	Desired Filipino traits	
54. Nipa hut		
55. Tagalog words, "kaunawaan, kamalayan, pagkakaisa, pamamahayag, tamang impormasyon"		
56. Words spelled in Baybayin, "pakikidigma, bayanihan"		
57. Cross Sign	Christianity	
58. Green trees	Life	
59. Sun	Hope	
60. Alibata "Ka"	Buwan ng Wika	
61. Wind	Challenges	

Table 1 shows that eight graphical elements are categorised as iconic signs. These iconic signs represent the entities involved and operating within the context of the prevailing pandemic. Iconic signs such as *Covid19*, *person eating healthy food*, *frontliners*, *community*, *pedestrian lane*, *road sign*, *hospital*, and *road* provide a clear illustration of the common encounters during the pandemic. These iconic signs used by the student artists in making their respective graphic arts revealed their attempt to describe the current situation that they tried to relate to the theme of the competition, which also focused on the prevailing pandemic, thus, creating clear imagery of the pandemic.

Meanwhile, 36 indexical signs were identified among the graphic arts of student artists. These indexical signs encapsulate the Filipino resiliency against the pandemic. This resiliency from the pandemic is depicted among the graphic arts by student artists as attainable through observing *safety and protection*, promoting *awareness through education and literacy*, and enhancing *labor through*

*innovations for economic progress* to lessen the adverse effect of the pandemic among Filipinos. This resiliency against the pandemic is also ensured by Filipinos' *spirituality* and *positivism* in fostering *Filipinism* and *national identity*. These indexical signs clearly illustrate what the student artists believe to be agents of resilience, which they seemed to realise and reflect out of their experiences considering the events happening within their locations at particular times.

On the other hand, 17 graphical elements among the corpus of graphic arts were reported to be symbolic signs. These symbolic signs represent the unique aspiration of Filipinos for *peace* and *unity* that are important in overcoming the *challenges* brought by the current health crisis. These symbolic signs are also found to reflect the unique response of Filipinos in attaining their collective aspiration, which includes practicing *nationalism* and *patriotism*, manifesting the *desired Filipino traits*, and adhering to the tenets of *Christianity* such as valuing *life* and possessing *hope* despite uncertainties.

### Drivers of Student Artists' Choice of Signifiers in Constructing Graphic Arts

Table 2 shows the drivers of artists' choice of signifiers in constructing graphic arts. Based on the emerging themes from the responses of the student artists their choice of signifier was influenced by their experience, self, family, other artists, and research. These influences were regarded as the drivers of their choice of signifiers in constructing graphic arts.

**Table 2: Drivers of Student Artists' Choice of Signifiers in Constructing Graphic Arts.**

Themes	Subthemes	Exemplars
First-hand experience	Encounters as ordinary individual	I also experience and saw the people around me how they suffered due to Covid-19 [P1]
	Encounters as active officer	I got my inspiration from experiences because being an ROTC officer we are able to promote unity... [P2]
Self	Motivation derives from self	I inspire myself to be more crowned to be better [P3].
Family	Inspiration from family members	Followed by inspiration from my parents, friends... [P3]
		... inspiration from ... fellow artists... [P3]
Other Artists	Insights from other artists	Before I made the entry, I asked my artist acquaintances to help me find out what is the message of this entry can be... [P6]
Research	Information from online sources	I also searched the internet for what was the happening at this time of pandemic... [P6]

Legend: [P] followed by a number represents the participant number assigned to each individual in the study.

Their first-hand experiences of the Covid-19 pandemic provided them inspiration in portraying how the health crisis affected the lives of ordinary individuals. This portrayal of the Covid-19 encounters among common individuals in their graphic arts illustrates people's vulnerability to the consequences of the pandemic, thus, creating a receptive stance or perspective of the situation. Meanwhile, their encounters as active student officers enabled them to visualise the leadership manifested by people in times of crisis. This visualisation of people's leadership creates an active stance or perspective of the pandemic in which people are taking action to find solutions to problems. Both receptive and active perspectives of the health crisis due to the Covid-19 pandemic



illustrated in digital visual arts by student artists were derived from their own experiences. This recounting of personal experiences as ordinary individuals and as active officers influences the choice of visual representation by student artists in capturing the prevailing condition, hence, their own experiences were helpful in conveying the message that they considered in illustrating their graphic arts.

Student artists' own selves and families were influential in their choice of signifiers for constructing visual arts. Their enthusiasm for creating better artworks, reinforced by the encouragement of their family members, served as inspiration for their creative expression through making graphic arts. This inspiration from self and family members motivated them and developed their confidence in artistically creating graphical elements considering the various sign types to convey the theme of their digital visual arts. Confidence and motivation are important for individuals to translate messages in their artworks. These artworks containing elaborate messages and were inspired by the student artists' family members, which enabled them to express their creativity. This driver can be described as a tendency to experience a feeling of inspiration that can lead to creativity through the comforts provided by family members.

Student artists' choice of signifiers was also influenced by other artists. By having the same niche and passion for digital arts, student artists consulted other graphic artists about visually representing ideas through appropriate choice of signifiers. This consultation with other artists provided an opportunity for exchanges of best practices in digital artmaking. Thus, insights from the other artists became a source of inspiration for the student artists as they engaged in an intensified interaction for having similar interests in art making.

Student artists tend to engage in research to obtain inspiration for an artwork by searching the internet for valuable information about the health crisis to be fully aware of happenings around the globe. By browsing the internet, student artists explored other information relevant to the concept they were portraying and innovative ideas that could improve the craftsmanship of their digital visual arts. This implies that the internet has become an indispensable part of people's interests including arts as different platforms to carry new information that could stimulate innovative ideas.

### **Functions of Student Artists' Choice of Signifiers in Constructing Themes of Graphic Arts**

Table 3 shows the responses of the student artists in the interview facilitated through individual video conferencing. The functions of student artists' choice of signifiers in constructing themes of graphic arts were identified through the emergence of themes from the analysed transcripts of the conducted interviews. Student artists carefully choose signifiers to incorporate in their respective artworks for expression, representation, and impression.

Through expression, student artists were able to communicate the messages and themes of their graphic arts through carefully selected symbols or images. This allowed them to share ideas and experiences of the situation they were depicting in their respective artworks. This sharing of ideas and experiences allowed them to connect with their audience through a clear depiction of common and similar experiences, enabling the viewers to easily comprehend the meaning portrayed in their artworks. Thus, expression as a function is comprised of creating, responding, and performing artwork in expressing ideas.

Representation emerges as the second major theme, which covers representing ideas, themes, and abstractions. This function enabled the student artists to portray their thoughts and represent the construct dominating their thinking. This representation of their thinking required their ability to

choose and illustrate images that harmoniously recreated the ideas, themes, or abstractions represented in their digital arts. By bringing the interaction of these various approaches to art representation, viewers can discern how a wide range of techniques and artistic interests work within digital arts. Student artists' techniques and abilities are helpful in refining their respective artworks to represent ideas and meanings. They can improve their skills and abilities in making artworks as they constantly engage in representing ideas and themes for efferent and aesthetic purposes.

**Table 3: Functions of Student Artists' Choice of Signifiers in Constructing Themes of Graphic Arts.**

Themes	Subthemes	Exemplars
Expression	Conveying messages or themes	images are of big help in...conveying the message because just like what I have said it is easier to understand of the viewers. <sup>[P1, P2, P4]</sup>
		the graphics or symbols help in conveying the theme by artistically expressing ideas and abstract concepts or represented on it. <sup>[P4]</sup>
Representation	Representing ideas, themes, abstractions	to represent not just the modern citizen, but present our ideas or messages that we want to deliver to the viewers. <sup>[P5]</sup>
		I use these graphics or symbols we have a message that will immediately, and it will connect to the theme... <sup>[P1]</sup>
Impression	Providing inspiration and stimulating awareness	each symbol that is placed here will imprint on the mind of the person who just wants to help people. <sup>[P5]</sup>
		the strength to provide information and give color and inspiration to everyone, addressed by the other graphics and symbols I used in my multimedia art. <sup>[P3]</sup>
		help in spreading...that...we are not the only ones who are aware of this, it should be known by the people around us. <sup>[P6]</sup>

Legend: [P] followed by a number represents the participant number assigned to each individual in the study.

Impression serves as the third theme. This function provides an opportunity for student artists to inspire and stimulate awareness of the prevailing situation among their audience. This function relates to the aesthetic and instrumental value of the arts having the capacity to influence viewers. The student artists believe that the meaning communicated by their digital arts can provide inspiration to the viewers to positively consider the Covid-19 health crisis as an opportunity for developing resiliency while being conscious of how people can adapt and find solutions to the health crisis. Thus, impression is an attempt to provide awareness and inspiration that can influence people.

### Discussion and Implications

This study describes the use of digital visual arts to communicate societal and cultural phenomena, particularly in the context of the Covid-19 pandemic in the Philippines. This involves examining how student artists represent their intended messages and how they shape viewers' perceptions of reality (Silverman & Rader, 2018; Azcárate, 2022). The findings revealed that student artists used iconic, indexical, and symbolic signs as signifiers in illustrating the themes of their digital artworks. Iconic symbols were used to provide a clear picture or imagery of real-life scenarios or events which stimulate the viewer's sensibility and contribute to effective visual

communication (Ghio et al., 2021). Meanwhile, indexical signs were used to showcase how people reacted to the Covid-19 pandemic as influenced by their time and place, making these signs effective in influencing people's cognition (Whittingham, 2019). Symbolic signs were used to present the collective consciousness of Filipinos, with regard to the prevailing health crisis, which is important in forming a national identity (Bedir & Öztunç, 2022), and allows artists to showcase Filipinos' unique and collective aspirations during the health crisis. Thus, student artists' signifier choice in the construction of the theme of their respective digital arts enabled them to develop and enhance their digital literacy through creative expression using digital tools and media. Dilmaç (2020) noted that the use of digital tools and media in digital art promotes student engagement and motivation by providing students with opportunities for creative expression and personal connection with their artwork.

The study also reveals that student artists' signifier choice in the thematic construction of digital visual arts is primarily influenced by their personal experiences and realisations, which allows them to create authentic and meaningful visual representations. This personal connection between the artist and their artwork can enhance their creative expression, build confidence, and inspire them to communicate their worldviews through their craft. The support system of family, fellow graphic artists, and online sources also plays a significant role in improving their creative expression (Kang et al., 2019; Cristóvão et al., 2020). By emphasising the importance of personal experiences and realisations in creating meaningful visual representations, educators can encourage students to draw upon their own lives and perspectives in their digital art projects. As these students are encouraged by a supportive environment, including the assistance of peers and access to online resources, they are provided with opportunities for collaborative learning and online engagement to enhance their creativity and technical skills (Bower et al., 2015).

Meanwhile, the student artists' choice of signifiers in constructing the theme of their graphic arts has been instrumental in providing them with opportunities for expression, representation, and impression. The student artists' expression, representation, and impression were achieved through careful selection of symbols and accurate graphical representation of their thoughts. This expression has the potential to inspire and influence the audience through the message communicated in their digital visual arts. This result clearly implies that digital visual arts can be used as a tool for effective communication and engagement with students. The careful selection of symbols and accurate graphical representation of thoughts can aid in the effective communication of ideas and concepts, thereby enhancing the learning experience for students. Moreover, the impression created by digital visual arts can inspire and motivate students, leading to better engagement and participation in online learning environments (Archibald & Kitson, 2019).

### **Implications for Digital Pedagogy**

The use of digital artmaking in communicating messages and ideas can serve as a meaningful and rich learning experience for students while developing their digital literacy skills. With the increasing demand for digital literacy in various academic disciplines, integrating digital artmaking into academic curricula can enhance students' digital literacy, creativity, and critical thinking skills. As such, educators in institutions offering open distance and e-learning modalities should consider incorporating digital artmaking into their academic curricula to provide students with opportunities for artistic expression while developing their digital literacy skills.

The study highlights the importance of the careful choice of signifiers by student artists to effectively communicate their messages and ideas, while showcasing their creativity and critical thinking skills in crafting their artwork, and trainers of student artists should consider the

intricate digital artmaking captured in the study in coaching their trainees on thematical constructions of graphic arts. Art appreciation courses could also provide reflective activities that enable student artists to understand their signifier choice in crafting their artworks.

The study showcases the role of digital visual arts in expressing resilience amidst the pandemic, and highlights how digital artmaking has become an emerging medium for Filipino student artists to communicate their experiences and advocacies. This finding emphasises the importance of digital artmaking in providing a platform for artistic expression, representation, and impression of ideas, themes, and abstractions that dominate the artworks of student artists. Given that digital art-making has become an important medium for student artists to communicate their experiences and advocacies, there is a need to integrate digital art-making tools into pedagogy. Teachers could introduce various digital tools and platforms that students can use to create artwork, such as Adobe Photoshop, Illustrator, and Procreate. It is also crucial to encourage students to express themselves creatively and experiment with different techniques and styles. Teachers could create assignments that encourage students to create digital artworks that reflect their personal experiences, emotions, and advocacies. Digital art-making provides an avenue for diverse representation and exploration of various themes and abstractions. Teachers could create a safe and inclusive classroom environment that encourages students to explore their culture, identity, and heritage through their artworks.

However, it is important to note that the study only focused on a specific group of Filipino students, and, as such, the findings may not necessarily reflect the perspectives of students from other cultural and economic backgrounds. Future research may explore how cultural and economic factors might influence student artists' signifier choice and their capabilities in using online tools to represent themes of digital visual arts. Moreover, similar studies could be conducted to capture other characteristics and practical applications of student artists' choice of signifiers in the thematic construction of varied visual art forms which may draw other implications for digital pedagogy.

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