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The Hyperaesthetics
of Graphic Narratives
and Implications in Art
Education：
Discussing a Work by
Chris Ware

The Hyperaesthetics of Graphic Narratives and Implications in Art Education：Discussing a Work by Chris Ware

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Abstract

Digital technology not only changes the essence of information, but also influences art and brings new connotations to aesthetics. For its methodology, the study analyzes text from the graphic novel, *Jimmy Corrigan; The Smartest Kid on Earth* by Chris Ware and draws upon the properties of "hyper "derived from digital art in the context of contemporary technological development. Additionally, Lunenfeld's (2000) concept of "hyperaesthetics" is utilized as the framework to discuss the new aesthetics of graphic narratives influenced by hyperaesthetics. It concludes that "the quality of hyperlink", "the concept and forms of hyper" and "filling up the semantic lacuna" are three important theoretical concepts to understand and interpret graphic narratives. The result of this study can contribute to the basic theory and future development of art education.

Key Words: Hyperaesthetics, Graphic Novels, Graphic Narratives, Art Education

Introduction

With the advancement of science and technology, digital technology has created an indelible impact on the arts, giving rise to the transformation and interpretation of aesthetic theories and the gradual construction of new digital art aesthetics. Transitioning from the mechanical and analogue era to the digital age, the inherent nature of information has undergone a great change. For example, paper books had been interpreted through linear lines of text in the past. But, Internet media now uses multi-directional text to allow users to express meaning in a non-linear manner. With digital art, artists express through technological tools or creation methods, which allows viewers to participate through digital interactive features. This creates a wide range of possibilities for the arts. Hence, today's digital art has become a focus for artists, educators, and critics. Digital art generally provides a physical or virtual field that encourages viewer participation. And, although digital art and other related aesthetics have been gradually receiving increased attention, the "interaction" itself is usually extracted as the theme or content in the field of art education. Therefore, how to prevent the overemphasis on technology and the bias of ignoring art essentials ought to be pondered. Through art, students are guided to grasp the essence of art and make connections to the world. In this way, meaning is constructed,meaning, which is considered to be one of the most important objectives of art education today. Due to technological development and cultural changes, art education concepts and methods need to be reexamined.

Under the influence of digital technology, digital characteristics have also caused changes to appear in traditional art media. Taylor (2004) believes that art education in the digital era offers more choices than traditional art education curricula since it can cover discussions, explorations and connections to visual culture in the technological world. Therefore, the diagrams, texts, and frames that constitute a graphic novel serve as the objects of study to explore how graphic narrative media in the form of traditional print display unique, new visual forms and an aesthetic significance influenced by contemporary digital art. As a result, the objective

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of connecting the intrinsic aesthetics of technology with the technological intermediary of visual culture is achieved. A narrative is an expression constructed through the conceptualization of thoughts; it is also the lens through which one understands and explores experiences. Through storytelling, we are able to reflect upon and interpret our own lives, thus providing an alternative constructive process to enter a state of internal reflection and significance. Additionally, today's art forms attract viewers to experience through dynamic images, audio and visual stimulation, and interactive effects. T.V., computer, video games, magazines, advertisements, and other media containing a great deal of graphics that we are exposed in daily life attract our attention. Hence, the condition of narrative media of integrated graphics and text, as opposed to other media that overemphasize images of sound and light, is an issue worthy of concern amongst the flourishing of digital art development today.

Fairclough(1995) pointed out that text is a major source of evidence. Textual analysis can lay the roots for a study's claims concerning the detailed characteristics of a text. Therefore, for this study, textual analysis was adopted as the research method. The unique techniques of expression techniques and creative forms in the graphic novel, *Jimmy Corrigan; The Smartest Kid on Earth*, by Chris Ware were analyzed. Moreover, the "hyper" properties extended from digital art characteristics amongst the context of today's technological development are coupled with the concept of "hyperaesthetics" proposed by Peter Lunenfeld (2000), and served as a reference for analyzing and exploring the new aesthetic trend presented by graphic narratives.. Textual analysis is also similar to textual interpretation in the sense that the theoretical value associated with certain knowledge and traditions are applied in the text, constituting a process of interpretation (Yu Mei-hui, 2000). Thus, the author takes the perspective of internal digital technology to make meaningful connections and interpretations of traditional art expressions related to media and vocabulary (text) as well as contemporary aesthetic concepts (theories) to provide a way to understand the implications in the era of contemporary art. Through imagination, participation, experience, reflection, dialogue, and an open style of thought,

meanings are constructed and possibilities are further explored, providing a new way of thought and direction based on art education theory.

Graphic Narratives and *Jimmy Corrigan; The Smartest Kid on Earth*

Inspired by Rodolphe Töpffer (1799-1846), the concept of modern comics emerged in Switzerland in the 1930s.[1]. People generally associate comics with a series of continuous images that are accompanied with dialogue balloons. These continuous frames appear in sequence, like the static form of a film. Although comics have existed for more than a century, they still lack considerable legitimacy in the field of art. Comics gradually received increased attention from academic, art, and business circles, leading to the gradual development of graphic novels - a more detailed classification of comics. Graphic novels are a type of media that combines text and graphics, and are coupled with features of space and time. According to Zheng Wen-Hui (2005, p.7), "Literature falls within the scope of time art and graphics within the scope of space art.   The media of literature media is both audible and tangible, so it has a flow of time to convey narratives. Graphic media includes pen and ink paintings or sculpture molds, so they easily show the image, texture, and momentum of an object. On the other hand, as objects take up space, they fall under 'space art.'" Graphic novels and comics have identical characteristics, but their specific definitions have not yet been developed. According to Guo Shu-Xuan (2010), the graphic and text form of graphic novels are similar to the comics we are familiar with, but they are fundamentally different in terms of form and content. He states that comics mainly use graphics as the axis for the narrative, and which are then supplemented by illustrated text boxes and dialogue bubbles. On the other hand, graphic novels, despite their "comic appearance," still tend to fall under the classification of a "novel" since graphics are not the main form of media for the narrative. However, this argument fails to distinguish the differences between the two. There are graphic novels that use graphics as

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[1] Leonardo De Sá (n.d.). *Rodolphe Töpffer* [Web blog message]. Retrieved from http://leonardodesa.interdinamica.net/comics/lds/vb/VieuxBois00.asp?p=Intro

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the axis for the narrative, or comics that contain more textual descriptions and complex plots due to a high degree of development in recent years. Therefore, an ambiguous sense still exists between the two. According to Gu Ba (2008), "Graphic novels possess complex features inherent in both comics and novels. According to   Wikipedia, graphic novels are a form of comics where adults constitute the main pool of readers. The story content is based more on literature or esoteric themes. The work is a cross between literature and art, and tells the story of a novel through graphics." According to Christensen (2006), graphic novels are the telling of a unique story through a comic form, and which occupies an important position in social studies. Since their development, graphic novels have been   particularly significant in academic research. One after the other, journals and books have been published about them.. For example, *Journal of Graphic Novels and Comics,* published by Routledge Publishing Group in 2011, aimed to construct a dialogue amongst graphic novel and comic scholars, historians, theorists, and practitioners. Additionally, *Teaching the Graphic Novel* (Tabachnick , 2009) collected 34 articles to explore the development of this new art form within contemporary cultural and educational fields. Hence, the graphic narrative constituted by the combination of graphic and text may seem similar to those of printed publications. However, it actually blends art and literature with creative experiences to become a new form that stands out in the comic category, thus highlighting its importance in the field of academic research.

Jimmy Corrigan：The Smartest Kid on Earth is the first lengthy graphic novel by contemporary cartoonist, Chris Ware. It was originally serialized in the non-mainstream comic book series, *The ACME Novelty Library* (Fig. 1), in the United States. The version that was later compiled contains 380 colored pages in a book format. The book describes the life and feelings of the protagonist, who is rather helpless and poor at socializing. He is also alienated from his father for decades. This work received the Guardian First Book Award in the United Kingdom in 2001, and was the first graphic novel to ever do so. With that said, it is not only a graphic novel in comic form, but also considered to be an important form of literature.This work is a semi-autobiographical story of Ware himself. The protagonist, Jimmy Corriga, is   lonely and naive. To some extent, he shares the same background,

mentality, and feelings of Ware. Ware was raised by his mother. On the graphic novel, he states: "It takes about 5 hours for you to finish this book, which is about equal to the total amount of time I have spent with my biological father[2]."   His estranged relationship with his father is obvious. In the story, Jimmy is abandoned by his father at a young age, and stays with his mother. 30 years later, he unexpectedly receives a letter from his father inviting him to spend Thanksgiving with him. With an uneasy heart, Jimmy sets off for the journey. As depicted by the author, the protagonist in the story looks forward to seeing his father despite feelings of anxiety. Ware projects his own feelings and characteristics into protagonist Jimmy, who works for the postal office. His feelings of loss and regret concerning his own father lead to his portrayal of Jimmy as a loser, enabling viewers to seek his lonesome image within the detailed frames. He presents the loneliness felt by the protagonist (Fig.2) through serene images and a mass quantity of repeated images, which alludes to the protagonist's daily routine and feelings of loneliness. Additionally, they express the close relationship amongst the author's thoughts, emotions, and creations. In the seemingly linear narrative of the story, the author uses a jump cut style of narrative to describe the generational relationship between father and son. On the same page, narratives from different dimensions of time and space were also illustrated (Fig.3). Further, visual elements like figures and tables were largely used to organize narratives and spaces (Fig.4), showing a coherent visual style as a result. The narrative structure and visuals implemented by Ware constitute rich and diverse features, contribute to the establishment of a graphic narrative vocabulary, display a new experimental style presented in comic form, and renew the audience's perception and experience of comics. For this paper, mutual discussion of the "hyperaesthetics" concept derived through expressive techniques and art characteristics describe anew graphic narrative aesthetics under its influence.

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[2] Readingtimes (2009). *Jimmy Corrigan：The Smartest Kid on Earth* [Web blog message]. Retrieved from http://www.readingtimes.com.tw/timeshtml/ad/FT0108/epaper.html

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Figure 1. *Jimmy Corrigan：The Smartest Kid on Earth* original serialized in *Acme Novelty
Library*.

Reprinted from Ware,C. (1995-1996). *The Acme Novelty Archive #06*. Retrieved October 28,
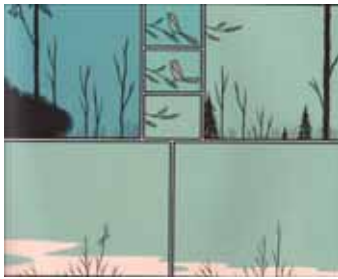2010 from http://www.acmenoveltyarchive.org/item.php?item_no=21

Figure 2. These scenes describe the character's lonely mental state via repeated images.

Figure 3. Interweave different space-time narratives in divided frames across one page.

Figure 4. The pictures organize the space and narrative by visual elements resembling diagrams.

Reprinted from *Jimmy Corrigan; The Smartest Kid on Earth* by
Chen, Nai-An Trans. (2009). (Orig. C.Ware). Taipei: China Times Publishing Co.
(Orig.publish:2000)

Hyperaesthetics in the Digital Era

In the past, people probed art and aesthetic definitions related to certain issues. As a result, the definition and perspective of aesthetics have been constantly subject to change. For example, Kant asserted that beauty is a selfless and subjective purpose. On the other hand, Clive Bell believed that a meaningful form constitutes the important essence behind artworks. According to Susanne Langer, art is the creation of symbolic forms for human affection. It wasn't until Arthur Danto proposed his perspective in "The end of art" did we witness this transformation. Similarly, the emergence

of digital media also completely changes the language of art and the connotations of creative forms. It breaks from traditional research, which places "beauty" as its main body. Instead, the openness and interaction of art is emphasized, gradually deconstructing people's definitions and understandings of traditional art. In today's digital age, art creation and technology are closely interrelated. In addition to the creations and presentations made by artists via digital tools, digital characteristics have also affected the flow of thought and ideas of the general public. Meanwhile, art forms of the past have also been changed. For example, the hypertext literature with the hyperlink design and interactive influences has expanded the expressive forms of literature[3]. For this study, how the concept of "hyperaesthetics" among digital art characteristics affects graphic narrative creations and aesthetics of traditional graphic narratives is explored.

Lunenfeld (2000) once proposed the concept of "Hyperaesthetics," which refers to the dynamic aesthetics applicable to dynamic arts. Dynamic art refers to works of art or visual culture that are created and presented through T.V., computer, and other technological media. Traditional aesthetic research targets fixed forms, such as sculptures and paintings. Today, under the influence of computer technology, originally designated classifications and boundaries of art have gradually blurred, and a type of aesthetics different from that of static and fixed objects has been applied to dynamic art. From the concept proposed by Lunenfeld, it can be found that "hyperaesthetics" constitutes the aesthetics and characteristics of a type of digital technology and art, or it possesses multimedia, nonlinear, and interactive features due to the uniqueness of the media itself. and Jen Ruei-Jian (2007) believe that the aesthetic thought behind digital art can be described on both an ontological and performance level. The former focuses on the interface characteristics of digital technology, while the latter emphasizes visualization, interaction, hypertext, hypermedia, and other forms of digital art expression. Hen Kuan-Chun (2007) further points out that interaction fully displays the aesthetic attitude of "removing subjectivity",

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[3] Li, Shun-Xing (1998, August 15). *Definition：Hypertext Literature*【Web blog message】. Retrieved from http://benz.nchu.edu.tw/~garden/a-def.htm

which allows viewers to fill in meaning. The characteristics mentioned are a part of the hyperaesthetics proposed by Lunenfeld. In addition, "hyper" in the terminology of hyperaesthetics also involves the basic characteristics of information technology - hyperlinks and hypertext. Hypertext emerged to serve as the "opposite" of linear text. Through the use of hyperlinks, readers or viewers can create reading avenues exclusively for themselves. They possess opportunity and diversity that are reinterpreted. This characteristic has been fully developed and applied throughout the course of development of the Internet.

Regardless of evolving times, the relationships amongst man, art, and technology have always been intertwined. Despite the certain reemergence of methods or changes in concept and form between new and old media, some internal structures remain the same. However, the influence of technological concepts on visual culture has led us to once again conceptualize previous art forms. For instance, the novel, *The Garden of Forking Paths,* by Jorge Luis Borges suggests that the novel itself is a maze of a thousand possible outcomes. Every time a different choice is made, a disjointed dimension is taken out from the portion of time, leading to a plot distinctively different from a previous development (Yu Mei-Chi., 2002). This leads us to think about an internal structure that is similar to the multilink path of hypertext presented through traditional literature narratives. Tthe nonlinear interlinking and construction produce an organic and meaningful space, and provide a multitude of messages. Taylor (2004) believes that Hyperaesthetics points out how technological media influences or mediates what we see, know, and interpret, as well as our classifications of art and visual culture. That is, digital art and its characteristics have a significant impact on existing art forms. Mandelbrojt (1999) believes that technological art has entered "the enthusiasm of youth" from the "pathology of childhood." Digital tools, such as the computer, are no longer just operated for the purposes of calculation, simulations of new technology, or the reemergence of old art forms. Instead, the characteristics of digital technology media have become a part of the connotations to a work. Therefore, how these characteristics are transformed is worthy of further reflection. The display of hyperaesthetics in graphic narratives will be described below to explore how

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the graphic narratives in traditional print media is influenced by hyperaesthetics and digital characteristics, forming a unique arrangement of structures, visual constructs, and new creative forms. Additionally, how the concept of aesthetics, under the influence of technology, affects the display pattern of the graphic narrative will be explored to develop new aesthetic concepts.

The Display of Hyperaesthetics in Graphic Narratives

Freedman (2003) believes that the evolution of visual technology tends to elicit qualitative changes in the visual culture. Using "stained glass" as an example, he believes that it changed the way people later "viewed" light, experienced space, and understood the meaning of life. Similarly, the multilink path of hypertext also promotes us to rethink previous art forms and urges us to re-conceptualize the multiple-plot narratives in traditional literature. The concept of discontinuous writing is reevaluated and reconstructed in our mind. In this study, Ware's work, *Jimmy Corrigan; The Smartest Kid on Earth*, is used to explore the relationship between narrative and"hyperaesthetics". Through their interlinking and demonstration, Chris Ware's work is specifically explored to establish a hyperaesthetics theory regarding graphic narratives. In this way, not only can the influence of digital technology on graphic narratives be gradually clarified, but the potential of graphic narratives can also be expanded. This provides for others possibilities in the implementation of art education in the world of technological media. This article concludes that "the quality of hyperlink", "the concept and forms of hyper" and "filling up the semantic lacuna" three important theoretical concepts.

The Quality of Hyperlink

The hyperlink is an important characteristic of digital art and information media. Through the anchor and link paths, the viewer is given multiple links and avenues of exploration. The hyperlink characteristics of digital media transform the linear development of traditional narratives into a form of multidimensional logical thinking, escaping the confines of a singular method of thought.. In the art of film, hyperlink characteristics related to expression

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can also be seen. For example, a film director attempts to emulate the multiple viewing perspectives and methods of computer technology via hyperlinks to launch multiple narrative structures. In a single film, the same incident is presented through different angles, perspectives, and observations through the lens - the influence of hyperlink characteristics on digital technology art is obvious. Chang Tien-Chun (2002) pointed out that this type of hypertext condition has characteristics of digital art, which alter the viewer's centralized viewpoint of the world, recreate a direction for multidimensional thinking, and even bring art into an open structure.

Comics or graphic novels within the category of graphic narratives are often compared to films or literatures. Hence, there are some comics that are silent films, or graphic novels that act as a new form of literature. Early theorists of hypertext also displayed an interest for comic art and attempted to analogue the comic and hypertext fields. They explored this by placing the characteristics of comics in a hypertext field. For example, Calvi (2001) explored the relationship between comic art rhetoric and hypertext. He cited the rhetoric skills commonly used in Japan-Analytical montage as an example to explain how they have been used to enhance the understanding of hypertext and develop hypertext aesthetics. The display of hypertext characteristics and implementation in graphic narratives are further explored below. The exploration shall cover three aspects: frame, time/space/mind, and narrative hyperlinks as detailed below:

The Frame and Hyperlink Node

The frame on the page not only serves as the first and foremost principle of the unique aesthetics of continuous art, but is also a part of the creative results. McCloud (1993) made six associative classifications for the conversion of comic frames: instant to instant, action to action, theme to theme, scene to scene, viewpoint to viewpoint, and discontinuity to discontinuity. The transition and conversion of these grids can be regarded as a hyperlink process, which are connected through nodes and linking paths. In the graphic novel, the grids on the frame are like previously defined nodes, in which a single grid represents an instant, and the instant contains a diverse amount of information linked by implicit paths arranged by the

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author. Calvi(2001) pointed out in *Hypertext and comics: towards an aesthetics of hypertext* that comics possess the characteristics of an "analytical montage" through which a single event can be described in a single frame (because the grid uses the combination of rhetoric and graphic information) or multiple grids. Similarly, through different camera angles, a story can obtain even more possibilities, such as increased actions, speeds, and sceneries viewed from different perspectives. As Jimmy imagines the appearance of his father whom he had never met, his imagination (Fig.5) is visualized by sixteen grids. Similar to the tree node setting (Fig.6), Jimmy's imagination runs through several lexias[4] to interpret the same incident, thereby making the narrative content flow more smoothly and comprehensively. This expressive technique is comparable to that of the hyperlink approach, which promotes linked thought, observer choice, and a provision for various viewing methods.

Figure 5. The sixteen pictures visualize the imagination of the character-Jimmy.

Figure 6. The structure of Jimmy's imagination to his father is similar to the hyperlink of trees's branch nodes. Adapted from *Jimmy Corrigan; The Smartest Kid on Earth*, by Author.

Reprinted from *Jimmy Corrigan; The Smartest Kid on Earth* by

Chen,Nai-An Trans.(2009).(Orig. C.Ware).Taipei:China Times Publishing Co.(Orig.publish:2000)

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4 Barthes describes lexias as "blocks of signification" and "units of reading" (*S/Z* 13). Lexias are the smaller sections of a larger, master text. Ironstone, P.,Leitch, C., Onyango, A., & Unruh, C.(n.d.). *Glossary : Lexias*. Retrieved from
http://www.arts.uwaterloo.ca/~raha/700_701_web/BarthesLO/glossary.html

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Transcending Time- Space and the Mind

McCloud(1993) once pointed out the division grids of comics and graphic novels convert the relationship of time into that of space. He also believes that readers see the frames of a comic as a frame of mind**.** From the perspective of a temporal and spatial relationship, Eisner(1985,p.38) considers,"In visual narration the task of the author/artist is to record a continued flow of experience and show it as it may be seen from the reader's eyes.This is done by arbitrarily breaking up the flow of uninterrupted experience into segments of "frozen' scenes and enclosing them by a frame or panel. "Thus, these frames possess the characteristics of time and space, while these framed scene fragments are like hyperlink node content settings completed by artists that wait for viewers to seek suitable paths amidst the vastness of textual links. Ware's work connects different temporal and spatial narratives together. Jimmy and his father meeting in the 20th century are jump cut to the time and space in 1893, when Jimmy's grandfather was abandoned. The two parallel story lines are interspersed through a temporal and spatial cascading that expresses the jump cut of time. Through this approach, the viewers' thoughts are also converted to a different temporal and spatial setting. The viewers seek meaning in the context of transcending time and space.

Frames in graphic novels are regarded as the first and foremost part of aesthetics, cognition, and narrative forms. The conscious use of graphic frames facilitates conceptual analysis and deconstruction. The arrangement of these grids is similar to the design of a hyperlink text, which systematically plans complex information and determines the significance and description of information content. The operation of the human mind is similar to that of hyperlink characteristics. When we discuss particular objects, we often associate them with other objects, experiences, and memories - multiple meanings conveyed by the hyperlink. Hyperlinks also mimic the abilities of the brain. Through the linking of instructions, storage, and recycled information, a two-way analogy can be achieved. When authors organize time and space by using grids to present narratives and viewpoints, this is similar to the hyperlink organization process,   The author's mind, memory, and thoughts are linked together to present the results one-by-one within the

grid nodes. Then, it is up to the viewer to connect the nodes and create meaning. As McLuhan (1999) once pointed out, everything produces resonance in the electrical era. Instead of using traditional linear and causal thinking to produce and perceive energy, the language of cells can create a synaesthetic, discontinuous, and integrated gap in awareness. In addition, both graphic novels and comics are filled with metaphors and symbolism. Viewers can produce different interpretations and create potential meanings, similar to the significance of the launch of a hyperlink. This is when our mind invokes graphics of individual thinking and unique living experiences to affect the interpretation. As McCloud (1993) states, "The cartoon is a vacuum into which our identity and awareness are pulled...an empty shell that we inhabit which enables us to travel in another realm." However, one may also be pulled back to a single node by the existing significance of a text. Roland Barthes describes this text-graph effect as the "Anchoring" action: "Text guides readers to make choices among the many possibilities of signified, so as to prevent these and accept those" (Nodelman, 2010).

The Hyperlink of Narratives

The non-linear jump characteristics influence the hypertext literary, thus producing network, hypertext, and other forms of literature. Hypertext can provide readers with a multitude of path choices and spawn new multi-directional reading behavior. This characteristic further affects the construct of graphic narratives beyond the static space presented by purely linear time and frames. Although Ware's work is similar to comics or films in that they all possess the same sequential grid presentation, it is also found that the hyperlink characteristics of large quantities of narratives express a seemingly continuous, but, in reality, divided time and space that jumps out. While Jimmy's friends play the game, Hide-and-Seek, sixteen grids are used to express a visual consistency (Fig. 3). The seemingly "whole" site space is divided by grids, while time and space from half a century ago are hidden within them. The scene from the past is inserted into the two grids on the left side of the middle row. To play the game on-site, one could only hide in the depressed pit or behind the horse riders. The grids each represent a

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different point in time, but the time does not progress based on a sequential grid. The time was taken back to half a century earlier through hump cutting by two grids - one returns to the time and displays the time level across a planar surface, while a frequent and incidental jump in the time sequence takes place in the text. Ware once stated in an interview that: "Comic strips let you flip back and forth in time, flip from one perspective to another, frame by frame.[5] " Additionally, in the jump cut line of narrative describing the parallel development between Jimmy and his grandfather, Ware uses the same high-rise scene to connect the two dimensions of time and space: the modern building across from Jimmy's workplace and the old high-rise building in his grandfather's time (Fig.7). This scene arrangement allows for a temporal and spatial jump out and a hyperlink to display another type of cyclical structure. While reading, viewers can once again experience the illusion of a visited sight without being able to identify the beginning and end of the story. Bennett & Jackson(2010) point out that Ware's graphic novel does not include page number, deemphasizes traditional narrative sequence and encourages reading practice that may move freely backwards and forwards and across the page in numerous directions. Compared to the majority of films or texts that focus on narratives based on a linear development, Ware's graphic novels provide other possibilities for graphic narrative models and create a breakthrough in the essence of a time sequence. Moreover, in the common page structure of a two-dimensional narrative, a narrative development is allowed to break through the narratives penetrated by the continuity of time through the structure of a page grid.

Ware once said that this type of compounding story line expression is similar to that of a webpage (Nissen, 2000). His carefully sketched figures and tables are like complex and overlapping web pages, and the parallel levels developed are generally presented through a sitemap. Ware presents the hyperlink characteristics in virtual space through single pages. In Fig. 4, connecting line segments are added to the grids to present the   intertwining and complex relationships of the protagonist. Relevant information is

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[5] Readingtimes (2009). *Jimmy Corrigan ： The Smartest Kid on Earth* [Web blog message].
    Retrieved from http://www.readingtimes.com.tw/timeshtml/ad/FT0108/epaper.html

conveyed through planar and visualized arrows in different locations across the grids. Ware's work introduces the concept of a hyperlink for technological information as media for a continuous narrative, and planar labels are used to explain the connection between the main subjects in the graphics. As a result, they become descriptive illustrations.

The Concept and Forms of Hyper

In addition to the display of hyperlink characteristics, the creative concept and form of digital art hyperaesthetics have also affected the construct and visual presentation of graphic novels, such as multimedia features presented in works that combine a variety of media, the emphasis on the connections amongst the author, work, and viewer, and the "0" and "1" encoding and decoding processes that originate from digital characteristics. How the "hyper" creative concept and form are presented in Ware's work shall be discussed in three parts.

The Hyper Media-The Mixed New Art Forms

Mixed digital features enable artists to easily combine multimedia formats, such as graphics, animation, and voice. In turn, the results become multimedia forms of art. On another end, Ware's work also possesses this multimedia feature. Strauss (2001) believed that a creative concept mixes multiple art forms such as comics, films, architecture, and music, in addition to combining text, graphics, time, and space. He described Ware's pages of grids as an attempt to create comics that can be read like musical notes of a music book. This mixed form is similar to the interdisciplinary cooperation commonly seen in digital art. The only difference is that his work interprets the characteristics of a variety of art forms through one type of media. In his book, Raeburn (2004) described the correlation that Ware's work has with architecture, music, and poetry.

Ware refers to in an interview: " comics are the visual equivalent of poetry: You're using imagery, in a limited space." He also believes that readers gain new experiences through comics, beat-by-beat, in the same manner musical instruments are played (Raeburn, 2004). The division and placement of the grids of varied sizes are like musical notes of different beat lengths on musical notations. Large grids appear after small grids, like notes

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with longer beats, and which allow the viewer to have a deeper contemplation. Thus he thinks that we can pull back and consider the composition all at once, as you would the façade of a building. You can look at a comic as you would look at a structure that you could turn around in your mind and see all sides of at once(Raeburn, 2004).

In addition, Ware intricately constructs the details of narrative expressions to present the complex relationships amongst events, people, and places. Ware mostly depicts the protagonist's various views of Superman jumping off a building across multiple frames (Fig. 8), including a distant, frontal, back, and close-up view of Superman. This is akin to viewing the building from different rotating angles. The construct and scale of each grid in the graphic narrative, and the configuration and composition of every visual element contain various implications and thoughts, much like how buildings speak an architectural language through unique forms, structures, sizes, and lines. Additionally, the frame division in Fig.8 is like the lens of a camera for a film.   Through them, comprehensive reflections can be viewed from different angles. Combined with concepts of music, poetry, film, and architecture, his work can be viewed as a "hypermediacy" in hyperaesthetic concepts. As stated by Li,Shun-Xing (2002), "Web pages absorb the characteristics of painting, T.V., films, and other media. Through media convergence processing, this 'multimedia phenomenon,' 'uses one media to reproduce another media' on one hand; on the other hand, this is the phenomenon of 'old' media existing within a 'new media.'" Ware's work is the convergence of multimedia characteristics found in such objects as web pages, which absorb multiple media characteristics. They are deemed as concepts related to old music, poetry, films, and architecture placed within graphic novel creations to reproduce concepts of artistic form through new media such as graphic novels. In other words, it is the multiple forms of art forms or concepts in graphic novels.

The Linking Relation between the Creator, Viewer, and Work

Marcel Duchamp, regarded as one of the foremost representatives of Dadaism, proposed the multiple relationships amongst the "creator-audience-work. (1986). He believed that: "Artists generally do not

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know the true meaning of their works, so the viewer always interprets the works and participate by supplementing and complementing the creative process." "The so-called artwork is determined by two aspects: the creator and the viewer. I find the former and latter equally important." Today, technology has been incorporated into art. And, in digital art, the relationships amongst the creator, viewer, and work have become more complex and diverse, making them important characteristics. The complex characteristics that link the hyperaesthetic creator, audience, and work are also displayed in Ware's work.

From the perspective of text and graphics, the two basic elements of graphic novel media, film images and voiceovers or caption are similar. They only differ in the sense that the film viewer reads a film's text according to an arranged narrative time and editing, while the graphic novel reader can freely control the language (text) and image tracks, choose if they want to see the text or graphics first, and decide the time spent on each grid. Wolk (2007) believes that comics imply a lapse of time, but the experience of time is, to a greater extent, controlled by the reader rather than the artist. Additionally, McCloud (1993) pointed out that the painting-style of graphics in comics demand us to participate in their operation. Other than what is given by the audience, there is no life. Through their reading process and behavior, the reader can breathe life into the continuous graphics. Ware's work contains many pages without words, yet filled with memories and descriptions. Only graphics are used to present the mind and feelings. For example, the multiple grids used to surround Jimmy's father's house describe Jimmy's sense of loneliness and waiting (Fig. 9). The graphics are open, yet unclearly defined. There is no way to specifically pinpoint what Jimmy is thinking at the time. In this manner, the reader may reflect his or her own thoughts into the graphics. They can also be viewed through the vision of the creator to experience the protagonist's thoughts and perceptions. As McCloud (1993) states, "The idea that a picture can evoke an emotional or sensual response in the viewer is vital to the art of comics. " This particular point leads viewers to infuse life and meaning into the graphics, the link between the audience and creator, the mutual influence, and the dialogue. Based on this approach,

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it can be found that graphic novels of a planar form of art and digital art share the same artistic characteristics.

Figure 7.
The modern building in Jimmy's period contrasts with the old building in his grandfather's period.

Figure 8.
 The images of divided frames look like different shot's perspective in film.

Figure 9.
The images in different frames describes the waiting states of Jimmy.

Reprinted from *Jimmy Corrigan; The Smartest Kid on Earth* by Chen, Nai-An Trans. (2009). (Orig. C. Ware). Taipei:China Times Publishing Co. (Orig.publish: 2000)

The Encoding and Decoding of the Significance of Graphics

The process for the creation and production of digital art originates from the digital encoding and decoding of 0 and 1 bits. The outcome created is a presentation of the program source codes hidden throughout the decoding process. This concept also appears in graphic novels. Berger (2009) argued that photography is a "citation" of the appearance of things, while paintings involve intermediary human factors more similar to a "translation" of appearance. In other words, through an internal "encoding" process and mental operations, artists "translate" objects or concepts to express different aspects of the world perceived through symbols, abstractions, simplifications, and other art languages. On another aspect, graphic novels and comics are a type of art form that presents images in a simplified manner. The graphic strategy adopted is a type of encoding and decoding process that generates meaning. Hence, the creator and viewer play the role of encoder and decoder, respectively, and graphic strategies become a particular program language.

Encoding

The graphics in Ware's work (Fig. 10) adopt the universal figure and symbol system (ISOTYPE) proposed by Otto Neuerath (Fig. 11) (Twyman, 1975). Neurath (2010) believes that there is no intention for Isotype to replace rhetoric language. Instead, it is a helpful language that comes with textual elements, which he calls a "language-like technique." This type of graphic is similar to letters that had become a type of symbol or technique for language. As the source of visual information, they produce infinite possibilities to meanings. Ware uses textual and visual graphics as his creative interfaces. During the process of encoding meaning, Berger states that (2009, p98): "Whenever a contour gradually takes shape while painting, the painter consciously intervenes through intuitive or systematic thinking." Ware chooses appropriate styles, codes, and symbols to present his ideas visually during the encoding process. As a result, heconverts relationships of meaning from the world of the author into that of the viewer. McCloud (1993) once said that comics are a form that undergoes a process of simplification and expansion. Therefore, simplification is also considered one of the approaches to encoding. In addition, pictures that accompany the axis of narrative are also introduced into the works, such as pictures of military service (Fig. 12), postcards, etc. These graphics also play an important role in the development of the narrative. Each picture not only speaks for itself, but is also accompanied by the memories and experiences of both the author and viewer. As a result, they become visual information that provides a potential significance and an element for visual encoding, such as simplified visual graphics and a source for generating different layers of meaning.
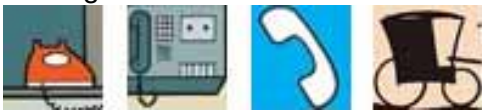
Figure 10. The images in *Jimmy Corrigan; The Smartest Kid on Earth.*

Figure 12. The military photo of jimmy's father.

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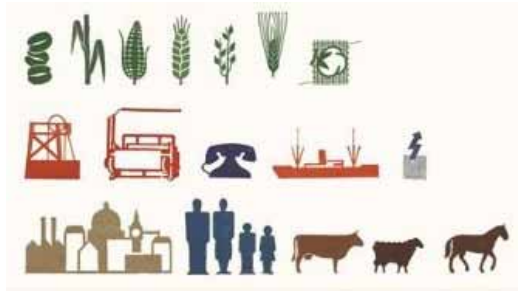Discussing a Work by
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Figure 11. ISOTYPE images.

Figures 10,12. Reprinted from *Jimmy Corrigan; The Smartest Kid on Earth* by Chen,
Nai-An Trans. (2009). (Orig. C. Ware).Taipei: China Times Publishing Co.
(Orig.publish:2000)

Figures 11. Reprinted from *From hieroglyphics to isotype: a visual autobiography* by
　　　　　Neurath, O. (2010). North London, Kentish：Hyphen Press.

Decoding

　　Comics and graphic novels are both art forms featuring simplified
expressions. They exclude the details of objects and focus on emphasizing
other details through abstract and graphic images to enhance the conveyed
meanings. The viewer also discovers meanings through the graphic
decoding process. In addition, the concept of "suspense" in the process of
reading a graphic novel also plays an important role in decoding. Ortony,
Clore and Collins(1998) believe that suspense is constituted by fear, hope,
and "an uncertain cognitive state", and that our grid-by-grid decoding is
indeed conducted through this concept. There is no way for us to know what
content will appear in the next grid, so we proceed with expectation, doubt,
and fear until the various stages of decoding is completed. The gaps
between the grids also contribute to the formation of new meanings, and
help present a more complete work. Additionally, during the decoding
process, the viewer must also possess general knowledge pertaining to
politics, history, and sociology. Based on our past experiences and their
underlying logic, or under the premise of the absence of a clear statement,
we infer and complete the interpretation of meanings. Therefore, the

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decoding process requires background knowledge, experience, and logic. For example, in Ware's work, he invokes Superman, a comic book character familiar to all, to symbolize his expectations to be strong. However, the story unfolds to show Superman falling suicidally from the high-rise building (Fig. 7), reflecting the protagonist's lonely and emotionally-deprived feelings. The inner thoughts of a brave man cannot be depicted. The author and reader engage in a "transcription" of graphics from the unknown to the known, achieving a method of communication between the two.Cartoonist Alan Moore once mentioned in an interview that the rhetoric and graphic interactions involve an "under-language". He says, "you control the interplay between those two elements in a way which not even film can achieve. There's a sort of 'under-language' at work there, that is neither the 'visuals' nor the 'verbals,' but a unique effect caused by a combination of the two. "（Wiater & Bissette,1993）The reader must master the text and graphics simultaneously while reading the graphic novel to gradually decode the encoded elements in the text and graphics. Only through this approach can the significance of the work be fully interpreted.

Filling Up the Semantic Lacuna

"Interaction" is a characteristic common to installation and net art.. In digital art, the significance of this is often open. During the interactive process, the audience obtains a personal inspiration transformation of their experiences and concepts. With the participation of viewers, the meanings behind works become even more complete. However, traditional art often possesses some kind of "interaction" as well. It differs from digital art only in the sense that the interaction of traditional art remains mostly in the exchange between the viewer and the work. Both the audience's personal participation in the "interaction" and the "mobility" of the spiritual exchange are regarded as processes for "filling the gaps" and making the work more significant and complete. In graphic novels, the text cannot be fully and actively constructed regardless of the reading (text), viewing (graphics), or the reader/viewer's approach toward the author's context of thought.. Instead, the text has a tendency to engage in significant creation through a "reconstructive," filling approach.

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Concerning graphic novels, it takes active and constant interactions with the graphics and texts by the reader to fill the gaps between grids, and participation in narrative construction to create a seamless experience, find inherent meanings, and link the reader's own experiences and memories. This concept is the same as the "Semantic Lacuna" proposed by Ricoeur （Simms , 2003 , p.65）: "When one thing is used as a metaphor for another thing, the two things will produce a significance gap, and this gap has to be filled and given a new significance by the author himself" (Cited from Lai Wen-shu, 2008). However, in graphic novels, the gap filling is not only done by the author, but also the viewer's involvement in the process. Graphic novels engage in narratives through the division and condensation of graphics to reflect experiences, viewpoints, and emotions. The content in the divided grids connect the time and plot of the story one-by-one, like simplified graphics that are used as metaphors to cross-reference thoughts, concepts, and objects. On another end, the gap between the grids are linked by two separated images and converted into a single concept through people's imaginations. (McCloud, 1993) In other words, though nothing exists between the two grids visually, experience tells the viewer that something has to be filled there. And, the viewer must constantly fill this grid gap from a series of fragments (i.e. time and objects) within his mind to construct condensed narratives. When this "semantic gap," as Ricoeur calls it, is filled, a "structurally loosening" or "domain ambiguity" of the original semantics will take place, facilitating the transformation or extension of a work's content, significance, or form (cited from Lai Wen-shu, 2008) During the reading process, the viewer must reconcile a loss of connection that often takes place between the grids. Only through this way can unexpected relationships and new meanings emerge. For example, Superman appears throughout the story of Ware's work. The original symbolic significance of Superman iss given a new meaning by the author - From being Jimmy's idol to the victim of a suicidal fall from a high-rising building, a brave man is suddenly deprived of his supposed bravery. The significance of Superman originally represented begins to loosen and become more ambiguous. To the viewer, the original perception of the symbolic significance of Superman is also altered.

McCloud(1993,p.63) mentioned that "closure" is the phenomenon of "observing in part and perceiving as a whole." It is also the action of filling gaps, which allows the viewer to understand the interactive relationship and significance between two ostensibly irrelevant grids. Hence, graphic novels are not a passive form of media, as they possess a high degree of openness and flexibility within the reading process. It takes the viewer's active involvement and dialogue to achieve the production, transformation, and extension of meaning. The viewer fills the gutters expressed as blanks with an implicit time and content. Using their imagination, they produce links as they travel back and forth amongst texts, graphics, grid structures, and gaps. By reading, observing, feeling, and thinking, the reconstruction of meanings is facilitated.

The Significance of Graphic Narratives in Art Education

Traditional education is oriented toward a basic, linear form of thinking. It is a relatively fixed training of thought, and the original ideas behind texts are often followed. This educational method is considered relatively inadequate to elicit student creativity. As art media and forms constantly undergo change, the greatest difference between technological and traditional art lies not only in external forms, but also in the thinking behind the essential content of aesthetics. On another end, changes in thought related to art aesthetics also create an impact on the development of art education. So, a new generation of art education systems and philosophies should bear a new focus on developing changes in art forms and aesthetics. Therefore, as far as art education is concerned, we should encourage students to view the world through different perspectives, obtain a sense of autonomy and the right to interpretation, develop an open-minded way of thought, and seek the connection between things. In this way, views that have greater depth are cultivated and richer sources of creativity are elicited.

The form and content of digital art is often associated with the proposition of conceptual questions or the construction of an ideal world, satisfying the audience's need for exploration through participation in the ongoing work and production of its meanings. Therefore, the value of hyperaesthetics lies

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in guiding students to rid themselves of the so-called standard answers of traditional texts and linear thought models, and to search unique methods of construction and assembly. The reading and creation of graphic narratives not only involve self-expression or communication, they also recreate meanings behind life experiences and provide routes for students to interpret information and understand the world. Through the reconstruction of these texts, a form reflection is achieved, which entertains greater possibilities towards understanding the self. Berger (2009) believes that the meanings in life are not produced in an instant. Rather, they appear from within various contacts and links, and are always in a state of continuous derivation and development. Without space for inference and development, the story framework is unable to allow the construction of new meanings. In Ware's work, through grid linkage and narrative organization, grids featuring a greater complexity have been created, and the formation of multiple-line narratives and readings are considered breakthroughs as far as the narrative methods are concerned. The opportunity to convert narratives has also been provided to allow for space and direction in the development of the story. Therefore, the contribution of hyperaesthetics in graphic narratives lies in the provision of open-minded thinking and the possibility of derived meanings. During a reading of both the graphics and texts, meanings are converted as the reader's choices varied. There is an interactive action that exists in the dynamic development between the two. In addition, the graphic novel explored in this study can be considered a dialectical conversation amongst the author, viewer and reality. Through the frame, a diffused and continuous sub-grid of images is used to view the world. While reading, the viewer not only enters the world of others and gets to know those others while observing their inner thoughts, but also engages in reflections and comparisons to acquire an opportunity for self-adjustment. As stated by Brunetti (2006 , p.7): "If we only "see" comics, they exist only as the original essence of architecture, which are the static aggregates of geometric patterns and organic forms. But, if we start to "read" them, we enter their world. The unexpected roles, plots, and emotions seemingly lighten up the core of our hearts." Therefore, Ware's work not only involves a reading, but also a process of enlightening the spirit. Through symbols and metaphorical

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graphics, narratives and emotions are displayed that can better invoke the viewer's potential to read graphics and text. Different viewers may interpret this text differently, and this is similar to one of the characteristics of hyperaesthetics in digital technology. The experience of art elicited by technology can display various connections between art media and technological issues. Similar to the relationship between graphic novels and hyperaesthetics explored in this paper, this information is provided as a reference for the implementation of contemporary art education. Hyperaesthetics in graphic narratives not only promotes link-related thought, but also provides the reader or viewer more diversified choices and possibilities in the construction and implementation of meanings.

The interaction and openness brought about by digital art that have become the current focus in art related issues, graphics, narratives, and graphic narratives should not be casually overlooked in art education. In the narrative, Morgan (2008) believes that: "As human beings, we have always been interpreting. We experience many events in life and attempted to create meaning. By linking incidents in order across the timeline, we find a way to explain or understand things and, thus, create our own life stories." In graphics , Roland Barthes argues that art forms such as drawings or paintings provide us with not only   analogies of reality or actual descriptions, but also implicit footnotes of reality through the processing of artists (Cited from Nodelman , 2010). This perspective of creating meaning from experiences and developing implicit meanings to reality is similar to the multiple structures of description from the various perspectives of hyperaesthetics.   This implies that one can create their own connotations to thought. On another end, graphic narratives present the inner thoughts and descriptions of stories by means of cross-media, texts, and graphics. Through a grid-by-grid focus and view, one's inner thoughts and actions are displayed, and the frame becomes a spiritual frame that can be depicted from various angles. Additionally, multiple forms and appearances can be provided. One also realizes that this interaction between graphics and texts can better channel complex meanings and thoughts, and thereby achieve broader possibilities for artistic imaginations. Drawings demand activities of the mind rather than those of the naked eye. Students can engage in text

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and graphic interpretation through graphic narratives to specify experiences, which Geertz (1983) believes is a characteristic of artworks. The special cast of mind is highlighted by tangible objects so that people can see it. The hyperaesthetics displayed by graphic narratives, on the other hand, allow us to understand the fact that art should be viewed from different angles, texts, and thoughts in the digital era, and that the various aspects of the world in the way we perceive them can be presented. This issue is worthy of more in-depth discussion in the field of art education.

Conclusion

Ware's work has changed and redefined people's stereotyped impressions of traditional comics, and invoked the potential of graphic novel expansions. The new aesthetics of graphic narratives can be regarded as a unique characteristic in the digital era. Feldman (2003) believes that art relies on technology, so it must be a temporary thing. Art only becomes eternally valuable when its technological effects become external expressions of internal thoughts. Hence, the three theoretical viewpoints of "the quality of hyperlink", "the concept and forms of hyper" and "filling up the semantic lacuna", proposed by this study explain how technology in the digital era leads us to new methods of art and viewing. It also prompts us to think about how to treat existing media in the new era and how the existing media introduces new digital concepts. In this study, the new concept of digital aesthetics was adopted to guide us to   reexamine our composition of the vocabularies of traditional graphic narratives. Hyperaesthetics produced by digital art affect the creation, reading, and interpretation of graphic novels, and give graphic narratives an alternative method of expression. This lets us understand that the digital era provides us with more viewpoints that are needed to enter interpret art. It is necessary for the field of art education to take the new implications regarding the development of technological art and aesthetics seriously. Only by doing so can we guide our students to think further on current changes to society, mankind, and culture.

Whether it is graphic writing or narrative drawing, it is the display of man's use of narratives to guide and shape life experiences, communicate

with others, and experience the world - it is the action to reconstruct meaning. Traditional narratives are deemed a form that relies on timing and the organization of logic. However, the timing in this narrative has been completely overturned. Through the concept of multiple links, one can choose to travel back and forth. At the same time, the viewing, thoughts, descriptions, and meanings of construction methods are subject to change. A graphic narrative is the process of visualizing thoughts and interpretations. Graphic narratives constituted by graphics and text remain a new method of art, literature, and creation even today. Other than the meanings found by reading, the viewer can also discover potential implications within the graphics. These meanings not only come from a summary of life experiences, but also shape other meanings concerning life and the self. They can even draw analogies to the digital world when viewed from an extended level of influence, altering the intrinsic essence of information. The hyperaesthetics in graphic narratives can be viewed as an important tool for understanding experiences in art education. Ascott (2004) once stated that artists must provide innovative text to reconstruct meanings that reveal themselves. Under the influence of technology, aesthetic characteristics are reflected and the hyperaesthetics of graphic narratives open up new ways to view the world. This creates an emphasis on the openness of meanings and allows the reader to create meaning from the context. It is necessary for art education to break free from the dominance of technology in the digital era and return to aesthetic connotations outside the use of technology. Only through this approach can we cultivate the cultural thinking and critical abilities of students in the digital era. This is an issue in art education that must not be ignored or delayed. Simultaneously, art educators are challenged to contemplate methods of guiding students towards understanding the important nature of the open meaning of art through art education.

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