

New Perspective on Visual Communication Design Education: An Empirical Study of Applying Narrative Theory to Graphic Design Courses

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Received: March 22

Accepted: April 6, 2017

Online Published: April 12, 2017

doi:10.5430/ijhe.v6n2p188

URL: <https://doi.org/10.5430/ijhe.v6n2p188>

Abstract

Visual communication design (VCD) is a form of nonverbal communication. The application of relevant linguistic or semiotic theories to VCD education renders graphic design an innovative and scientific discipline. In this study, actual teaching activities were examined to verify the feasibility of applying narrative theory to graphic design courses. Matched group design was employed to equally divide 30 participants into experimental and control groups, who participated in distinct activities over a 4-week period. The results revealed that incorporating narrative theory into graphic design courses enabled increasing students' poster design capabilities across various dimensions, including thematic concept, image creativity, and visual aesthetic. Narrative is a storytelling method. Applying narrative techniques to VCD not only facilitates the creativity of designers, but also elicits the audience's visual memory, thereby encouraging a bidirectional communication between the two entities.

Keywords: Visual communication design, Graphic design, Narrative theory, Design education

1. Introduction

To clearly distinguish the layers of a textual narrative and explore its forms and functions, a new discipline has been developed and referred to as narratology by Western philosophers and scholars (Bal, 2009). Precisely, narratology involves a representation of a series of symbols, such as stories, events, and phenomena (Polkinghorne, 1989). Narratives, a concept derived from narratology, involve message dissemination through storytelling and convey certain ideas to the audience. Louchart and Aylett (2004a) noted that human beings are the only animal on Earth that uses languages and words to convey meanings and record behaviors. Stories, either fictional or real, are created by using languages or words to describe personal life; this is the origin of narrative theory. The concept of narrative was derived from literary works, and long-term research into the transmission of narratives has gradually evolved into a set of narrative theories from the fields of linguistics and semiology (Aylett & Louchart, 2003). These narrative theories and methods have assisted scholars to explore the human life and mind during the past 25 years (McAdams, 2006).

During its operational period between 1919 and 1933, the German art school Staatliches Bauhaus applied design education to the curriculum design by incorporating concepts and theories from various fields, including aesthetics, art, science, and culture (Findeli, 2001). The ultimate objective of design education is to develop and formulate design theories and implement activities that are creativity-based, thought-provoking, and improve the value of life (Lerner, 2005). Design education includes visual communication design (VCD), which broadly involves the comprehension and interpretation of visual information that is ubiquitous in life, the creation of visual content, and the communication of such content (Lester, 2013). More specifically, VCD is used to teach students to convey meaning in a nonlinguistic way, which requires visual creativity and communication skills (Agrawala & Berthouzoz, 2011). Catterall and Pepler (2007) suggested that creativity in visual arts is closely related to current social activities and relies on common life experiences to communicate messages and thereby resonate with the public. In addition, social consensus affects the creation of visual value; visual creativity developed through design education requires

inspiration from cultural and life experiences (Csikszentmihalyi, 1991). Visual communication involves the process of communication and persuasion and the shaping of cultural value. Thus, visual design can influence lifestyles and shape identification with social and cultural values.

Although design has been considered as a branch of fine art since the 15th century, it is actually a distinct field (Frascara, 1988). From the perspective of artistic creation, design combines both a rational and a perceptual process, differs from fine art in terms of technique, and can become a scientific and systematic discipline through adequate principles or theories. Therefore, the present study applied narrative theory to visual design education. Although narratology was first proposed by French scholar Tzvetan Todorov in 1966, it did not receive much attention until 1985 (Bal, 2009). From the perspective of design applications, narratology pertains to a novel design concept that has been widely adopted by both design practitioners and scholars. Long-term observation of design exhibitions and student design competitions in Taiwan indicates that design students' originality has begun to fade in recent years; especially as technological advancement has produced numerous design application programs. Such programs have slowly disrupted students' design originality and resulted in more emphasis placed on the effect displayed by design rather than on the essence of design. In this study, narratology was employed to examine whether narrative theory can be used to create a nonconventional and innovative instruction model for VCD education.

2. Literature Review

2.1 Summary of Narrative Theories

The term narratology was originally proposed by French scholar Tzvetan Todorov in 1966 in his book, *Grammaire du D cam ron* (Genette, 1983). Since the 1970s, narratology has sparked enormous attention and discussion in the field of literature (Bal, 2009). The use of narratives dates back to prehistoric societies, in which mythological stories and logographic writings were created to describe events or convey messages, marking the start of narrative activities (Roberts, 2001). Although narratives were mostly applied to myths and folklore in early times, any visible and sensible materials or symbols can be used as a narrative element (Williams, 2009). Thus, narratives are a basic pathway for understanding a society or reflecting the world or personal life (Bal, 2009). Narratology research was initially prompted by French structuralism and has only become an international trend in recent years. Structuralist narratology shifted the attention from the external structure of texts to their internal structure, stresses the importance of scientific and systematic procedures, and focuses on examining the pattern of internal structures of a narrative text as well as the relationship between all elements within the text (Roberts, 2001).

Narratology was previously regarded as a branch of structuralism. However, structuralism originated from the Swiss linguist Ferdinand de Saussure's theory of the linguistic sign, which suggests an intimate relation between language, sign, structure, and narrative (Fludernik, 2005). From the perspective of storytelling, the basic structure of a narrative consists of a story, a discourse, and a narration; such structure transforms an event into a linear organization that has the form of a story. When the narration is formalized (i.e., the message is conveyed), this event becomes the text of a story (Landa & Onega, 2014). In other words, a story refers to the description provided by a narrative and exhibits a narrative structure and dramatic tension. A narrative discourse is a method for describing a series of events, and narration refers to the overall process of storytelling. From the perspective of art design, recent narratology theories have started to influence design. In its essence, iconology is the narrative design of visual communication (Young, 2009). Narrative theory studies emerged in the 1960s and is closely associated with the concept of structuralism proposed in the mid-20th century (Fludernik, 2005). Research in structuralist narratology has mainly focused on studying literary works, but has in recent years spanned across the fields of art and design (Young, 2009).

Narrative studies either in literature or art design can be traced back to Saussure and the American linguist Charles Sanders Peirce, who laid the theoretical foundation for structuralism using their theories of linguistic signs. American narratologist Gerald Prince (2013) defined narrative as a combination of events and phenomenon signals. Because a signal can be considered as a sign, narrative theory can be regarded as a novel product of linguistic sign theories. Crucial to narrative theory, a narrative text allows a narrator to narrate a story through a specific medium such as language, image, voice, or architecture (Bal, 2009). Thus, all cultural products with narrative characteristics can constitute research material (Young, 2009). Human memory relies on narrative forms to memorize events, particularly those that are unorganized and vague (Williams, 2009). If narrative forms can be used to create stories, then lost memories can be retrieved in a disordered state to establish a causal relationship between events. Then, human beings can employ their cognitive predictive ability in transforming contradictory narrative characteristics into ideal ones and perform individual creation tasks (Liu, 2008).

2.2 Visual Communication Design Education

Since the foundation of Bauhaus, design has gradually transformed into a comprehensive discipline, which requires students not only to study design history, cognitive psychology, and semiology, but also to acquire drawing skills (Margolin, 2002). Because of the improved development of design education, VCD has been included as a critical training course in vocational schools, art schools, and high education institutions (Swanson, 1994). In response to the highly developed commercial society, the position of visual communication designer has gradually been accepted by the public (Swanson, 1994). Most people also agree that visual communication designers can use their own creativity and aesthetics to generate substantial profits for a customer's product or service (Swanson, 1994). However, VCD is presently at a crossroads, at which the past training method of artistic intuition and the current training method of logical design are in a conflict because the principles of VCD remain unconfirmed and are not fully established in the field of graphic design (Bennett, 2006).

Although graphic design is a rational thinking process (Byrne, 1990), VCD entails the roles of both artists and graphic designers and involves rational and perceptual designing processes (Newark, 2002). Visual communication designers were often referred to as commercial artists by their customers (Hollis, 2001). However, cultural development and progress has gradually altered the social perception of VCD and facilitated understanding of this field (Frascara, 1988). More precisely, VCD is a product of both an industrial society and a cultural economy (Hollis, 2001). The visual style of VCD has been extensively discussed by numerous scholars. However, Frascara (1988) suggested adjustments to several viewpoints on the visual style of VCD. For instance, the importance of visual structure tends to be overlooked in esthetic contexts; the importance of ideas is generally neglected during the process of visual communication; designers often fail to distinguish appropriately between visual creation and visual manipulation; and designers tend to overlook the importance of public feedback when attempting to convey a message. These factors have caused graphic design students to mistake VCD for visual arts creation. In fact, they do not involve the same creation process or thinking mode.

VCD education has gradually developed in Taiwan by being included in the curricula of departments related to graphic design, advertisement design, commercial design, and applied arts. In 1994, VCD was officially separated from industrial design and arts and treated as an individual field in Taiwan, indicating that the core objective of graphic design had shifted from commercial problem solving into cultural and social consideration (Tseng, 1996). In VCD education, graphic design is a required course covering the VCD foundations, which are ubiquitous in daily life and serves to explain, decorate, and identify (Newark, 2002). Graphic design typically involves selecting images and aligning them onto graphic materials to convey a certain concept (Barnar, 2013). Graphic design works generally feature both text and images, which are crucial design elements that generate a complete meaning once integrated. Barnar (2013) defined graphic design as a process of transforming texts and images into signs. New meanings are thus generated when various signs are juxtaposed because each individual sign has its own particular meaning. Therefore, the quality of a graphic design work is not determined by the audience's comprehension, but rather by whether the signs used by its designer create a space of imagination by drawing upon the audience's personal experience.

3. Research Design

3.1 Experimental Procedure

A teaching experiment was conducted through university graphic design courses to investigate the application of narrative theory to poster design. The objective of this instruction program was to assist students in designing a public welfare poster. Four weeks of teaching activities were organized for this experimental program, which was designed according to the experiment implemented by Yang and Hsu (2015) and was performed through the following procedures (see Fig. 1):

- 1) Select university freshman students as the experiment participants.
- 2) Request each participant to design a public welfare poster at the beginning of the program; the posters were graded as the pretest scores.
- 3) Invite three graphic design teachers to determine the pretest scores.
- 4) Input the pretest scores into SPSS 22.0 for ranking. Use the median as the reference point; 15 students with scores closest to the median were selected from each side of the median, totaling 30 participants.
- 5) Apply matched group design and divide the 30 participants into Groups A and B, each comprising 15 participants.
- 6) Treat Group A as the experimental group (which received narrative theory instruction) and Group B as the control

group (which did not receive narrative theory instruction).

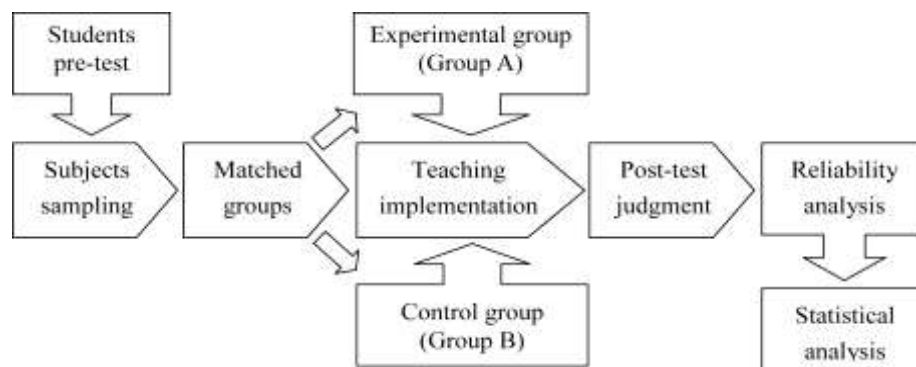


Figure 1. A flow chart for teaching experiment (Yang & Hsu, 2015)

3.2 Pretest and Group Matching

Purposive sampling was employed to select 47 freshman students as the preliminary participants from the Department of Visual Communication Design at Ming Chi University of Technology. The inclusion criteria were those who are aged 18–19 years and have never received graphic design training. Before the experiment was initiated, each participant was asked to design an A4-sized environmental conservation poster within 3 hours. In addition to promoting environmental conservation, each poster required a visual picture, a headline, and a body text, and a report describing the design concept (within 100 words) was submitted after finishing the poster. The posters were used to determine the pretest scores of the preliminary participants.

Three graphic design teachers were recruited to assign pretest scores. The score of each poster was summed up from four dimensions, namely, thematic concept (25%), image creativity (25%), visual aesthetic (25%), and expressive technique (25%), and averaged between the three teachers. Excluding the posters with outlier scores yielded 41 posters for subsequent analysis. The median score was used as the reference point, and 15 students with scores closest to the median were selected from each side of the median, totaling 30 students as the final participants (Yang & Hsu, 2015).

The pretest scores of these 30 participants were ranked from the highest to the lowest. Matched group design was adopted to divide these participants into Group A (experimental group) and Group B (control group), comprising 15 participants each (Table 1). Different instruction activities were applied to these two groups. After the participants were matched and grouped, pretest scores from both groups were analyzed to calculate the average score of each group and compared using an independent sample *t* test, thereby determining whether they exhibited similar design abilities. The mean scores of Groups A and B were determined to be 84.17 (*SD* = 4.23) and 83.86 (*SD* = 4.11), respectively, and the *t* test revealed a *p* value of .432 (*t* = .943 and *df* = 28), indicating that the two groups differed nonsignificantly (*p* < .05). In other words, before attending the experimental instruction program, the experimental and control groups did not differ significantly in poster design ability.

Table 1. Grouping of the experimental participants

Score ordering	S1	S2	S3	S 4	S5	S6	S7
Group Matching	A	B	B	A	A	B	B
Score ordering	S8	S9	S0	S28	S29	S30
Group Matching	A	B	B	A	A	B	B

3.3 Program Design

The experimental and control groups received 4 weeks of instruction sessions consecutively (one session per week and 3 hours per session). For each session, the first 1.5 hours were graphic design instruction and the remaining time entailed student practice. Thus, a total of 720 hours of instruction was administered to the participants. The students were asked to select a public welfare topic from the course content (e.g., nuclear safety, human rights promotion, educational equity, and environmental protection), conceive three poster design concepts on the basis of this topic, and select one concept to complete the poster design assignment.

The volumes used as teaching materials for this experimental program included: *The Essential Principles of Graphic Design* (Millman, 2008), *Graphic Design: The New Basics* (Lupton & Phillips, 2014), *100 Ideas that Changed*

Graphic Design (Heller & Vienne 2012), *Effective Poster Design* (Van Dalen et al., 2002), *Applying Narrative Theories in the Design of Public-cause Posters: Process and Educational Implications* (Yang & Hsu, 2017). Furthermore, the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model proposed by Molenda (2003) was adopted to guide both groups to design adequate posters. Both groups studied the same course content during the first week. From the second week onward, the control group was taught using the case method only, whereas the experimental group was taught by introducing narrative theory, helping them create posters from the a narrative perspective. The course content of the two groups are explained as follows:

Experimental group (Group A)

1) Week 1

- Topic: Introduction to public welfare poster design
- Content: Define the public welfare poster and introduce public welfare topics from the perspectives of society, economy, and culture to assist learners in conceiving a design concept.

2) Week 2

- Topic: Narrative approaches and procedures for a public welfare poster
- Content: Teach the application of narrative theory to poster design, the meaning of iconic signs on a poster, and the procedures of encoding and decoding narratives.

3) Week 3

- Topic: Application of narrative design to public welfare posters
- Content: Teach the use of visual languages (e.g., shape, text, and color) to integrate and visualize design concepts.

4) Week 4

- Topic: Narrative skills for designing a poster
- Content: Teach the conception of a design concept through storytelling and the visualization of a public welfare poster through the similarity between various objects.

Control group (Group B)

1) Week 1

- Topic: Introduction to public welfare poster design
- Content: Define the public welfare poster and introduce public welfare topics from the perspectives of society, economy, and culture to assist learners in conceiving a design concept.

2) Week 2

- Topic: Styles and types of public welfare poster design
- Content: Classify posters created by renowned graphic designers or those that received international awards according to their design style and type.

3) Week 3

- Topic: Color and visual expression of public welfare posters
- Content: Classify posters created by renowned graphic designers or those that received international awards according to their color and visual expression.

4) Week 4

- Topic: Text and composition of public welfare posters
- Content: Classify posters created by renowned graphic designers or those that received international awards according to their text arrangement and visual composition.

4. Result

4.1 Reliability of the Judges

After the program was completed, the same three teachers employed for assigning the pretest scores also determined the posttest scores, which were summed up according to the same four dimensions as those in the pretest, and averaged among the three teachers. The posttest scores of both groups were then imported into SPSS 22.0, and an inter-judge reliability test was performed using Kendall's coefficient of concordance.

The reliability test results demonstrated that thematic concept, image creativity, visual aesthetic, and expressive technique attained a Kendall's W value of .912 ($p = .000$), .973 ($p = .000$), .789 ($p = .003$), and .834 ($p = .001$), respectively, implying that these four dimensions all reached the significance level of $p < .05$. In addition, the Kendall's W value for the total score was .953, suggesting a significance level of $p < .001$ ($p = .000$). This demonstrated consistency among the posttest scores assigned by the three teachers. In other words, the posttest scores were adequately reliable and thus suitable for determining the differences in the learning outcomes of the groups.

4.2 Analysis of Teaching Achievement

In the experimental group, the means for thematic concept, image creativity, visual aesthetic, expressive technique, and total score were 22.00 ($SD = 1.07$), 21.87 ($SD = 1.19$), 20.73 ($SD = 1.06$), 20.27 ($SD = 1.10$), and 85.01 ($SD = 3.25$), respectively. In the control group, the means for thematic concept, image creativity, visual aesthetic, expressive technique, and total score were 20.93 ($SD = 1.73$), 20.80 ($SD = 1.61$), 19.87 ($SD = 1.96$), 19.60 ($SD = 1.91$), and 81.20 ($SD = 5.13$), respectively. Moreover, the standard deviations of both groups indicated that, compared with the control group, the experimental group exhibited a higher consistency in the score of each dimension and the total score (Table 2).

Table 2. Average scores and standard deviations of experimental and control groups

	Group A (experimental group)		Group B (control group)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Thematic concept	22.00	1.07	20.93	1.73
Image creativity	21.87	1.19	20.80	1.61
Visual aesthetic	20.73	1.06	19.87	1.96
Expressive technique	20.27	1.10	19.60	1.91
Total score	84.87	3.25	81.20	5.13

One-way ANOVA was performed to identify statistically significant differences in the four dimensions and total score of the groups. The results indicated that, for thematic concept, a significance level of .017 ($p < .05$) was reached between the groups with $F_{(1, 88)} = 6.47$ ($M_{\text{experimental group}} = 22.00 > M_{\text{control group}} = 20.93$); for image creativity, a significance level of .021 ($p < .05$) was reached between the groups with $F_{(1, 88)} = 5.95$ ($M_{\text{experimental group}} = 21.87 > M_{\text{control group}} = 20.80$); for visual aesthetic, a significance level of .031 ($p < .05$) was reached between both groups with $F_{(1, 88)} = 5.14$ ($M_{\text{experimental group}} = 20.73 > M_{\text{control group}} = 19.60$); for expressive technique, a significance level of .081 ($p > .05$) was not reached between the groups with $F_{(1, 88)} = 3.27$; and for the total score, a significance level of .009 ($p < .01$) was reached between the groups with $F_{(1, 88)} = 7.89$ ($M_{\text{experimental group}} = 84.87 > M_{\text{control group}} = 81.20$; see Table 3).

Table 3. One-way ANOVA results for experimental and control groups

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Thematic concept	Between Groups	8.53	1	8.53	6.47	.017*
	Within Groups	36.93	88	1.32		
Image creativity	Between Groups	8.56	1	8.56	5.95	.021*
	Within Groups	40.13	88	1.43		
Visual aesthetic	Between Groups	5.63	1	5.63	5.14	.031*
	Within Groups	30.67	88	1.10		
Expressive technique	Between Groups	3.33	1	3.33	3.27	.081
	Within Groups	28.53	88	1.02		
Total score	Between Groups	108.31	1	108.31	7.89	.009**
	Within Groups	384.40	88	13.73		

* $p < .05$ ** $p < .01$ *** $p < .001$

5. Discussion

5.1 Constructing a Model of Narrative Design Model

A narrative entails a method of storytelling. In fact, a designer's job is similar to storytelling. Just as a storyteller vividly describes anecdotes heard from the countryside as if they had experienced them, a designer can also apply narrative techniques to VCD, which can not only facilitate the creation of design concepts, but also achieve the goal of mutual communication by retrieving the audience's visual memory. The present study analyzed the logic of narrative possibilities (*les possibles narratifs*) proposed by Claude Bremond (1929–1973) and applied this logic to construct a narrative model for designing public welfare posters. This model was then employed in the proposed experimental program, in which the experimental group was asked to identify feasible topics and visual images from recent news items or stories to design their public welfare posters. This narrative model for public welfare poster design was divided into three creation process dimensions: (1) narrative statement, which involves using the languages, texts, or words of a causal relationship to address a public welfare topic on the poster; (2) symbolic instantiation, which requires the transformation of a narrative statement into feasible symbols; and (3) technique application, which involves presenting a poster through different design techniques (see Fig. 2).

The application of narrative design to a public welfare poster involves several procedures. First, an authentic news item or story is used as the inspiration for designing the poster. The news item or story is then examined under the dimension of narrative statement, which generates keywords by analyzing the language, text, or expression of the news item or story. Under the dimension of symbolic instantiation, these keywords are then transformed into symbols, and a poster draft is produced according to the characteristics of these symbols. The draft is then examined under the dimension of technique application, which requires the designer to select adequate techniques to complete the poster design using their own judgment. The creation procedures of the proposed narrative design model can be illustrated as follows: (1) Find a public welfare topic for the poster: select an appropriate topic related to social, environmental, human rights, or peacemaking issues; (2) Determine a narrative subject: select an authentic news item or story from a media report; (3) Apply narrative statements: analyze the language, words, or text sequences of the news item or story; (4) Perform symbolic instantiation: transform the narrative statements of the news item or story into feasible symbols; (5) Generate a poster draft: produce a poster draft according to the characteristics of the obtained symbols; and (6) Techniques application: determine adequate design techniques to showcase the creative narrative concept of the poster (Table 4).

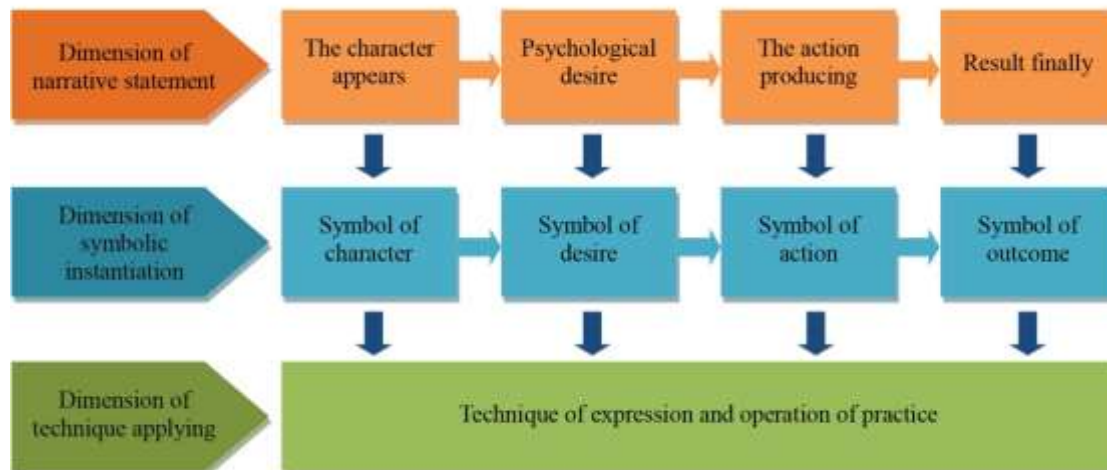





Figure 2. Narrative design model for public-cause posters

Table 4. The narrative of a public-cause poster concerning human rights issue

	A news article content			
	<i>“Human Harvest: China’s Organ Trafficking”</i>			
Dimension of narrative statement	<p><i>A new documentary produced by Australia’s SBS Dateline presents evidence from an investigation done by Nobel Peace Prize nominees David Kilgour and David Matas, and sheds new light on the organ harvesting that to this day is occurring in China. Every year about 10,000 organs are harvested in China, yet there is a small number of people in the official donor list. So, from where does the majority of organs being harvested comes from? The documentary gives evidence, including testimonies from nurses and surgeons who have come forward to explain that prisoners, including political prisoners/prisoners of conscience are used to harvest organs used in the multi-billion dollar industry.</i></p> <p>(Source: www.abovetopsecret.com/forum/thread1063409/pg1)</p>			
Dimension of narrative statement	Character appears	Psychological desire	Action producing	Result finally
	China government	Covet after wealth	Inhuman crimes, Organ trafficking, looting... etc.	Painful, Sufferers, Death, fear... etc.
Dimension of symbolic instantiation	Symbol of character	Symbol of desire	Symbol of action	Symbol of outcome
	China’s flag, Map of a country...etc.	Money, Gold, Renminbi... etc.	Scalpel, Scissors, Handcuffs, Chain...etc.	Tears, Crying, bleeding, deperation...etc.
	Technique of expression and operation of practice			
Dimension of technique applying	  			

5.2 Performance on Visual Creation for Designing Posters

With the development of advanced technologies, the cultivation of creative talent has become particularly crucial. In the next century, intellectual competition will be replaced by competition for creativity in applying technology (Liu, 2008). Creativity is critical for the development of design education. However, VCD education in Taiwan has long been limited to instructional activities from the visual or applied arts. In the process of instruction, teachers tend to focus more on improving students’ artistic expression skills, rather than instructing the nature of design as a form of communication. In fact, the purpose of VCD is to teach students to employ visual design techniques to convey an implicit idea to the audience and thereby achieve the goals of communication and emotional exchange. An examination of Taiwan’s visual design works in recent years indicates that technological convenience has gradually reduced the originality of these works and limited the topics explored because designers have unconsciously begun to pursue visual effects and overlook the communication of messages.

VCD has long been considered a branch of fine art, despite the distinctive characteristics between the two fields (Frascara, 1988). Artistic creation requires artistic talent and is mostly a black-box process. This notion has led people to believe that design students must possess talent for the practice of design (Bennett, 2006) and has shunned numerous passionate learners who believe they lack artistic talent. In contrast with fine art, the process of artistic creation for design is both rational and perceptual, and it can become a scientific and systematic discipline through adequate principles or theories. The present study adopted an innovative teaching strategy by incorporating narrative theory into a graphic design education program to identify the differences between the conventional and proposed

teaching methods. The results of the experimental program revealed that applying narrative theory to graphic design courses not only assisted the participants in developing a topic for the poster and expressing their visual concept, but also increased their visual aesthetics (Fig. 3). In addition, a noticeable difference was observed between works designed by members of the control group, who received conventional graphic design instruction, and those created by the experimental group students (Fig. 4). An in-depth interview of the control group revealed that some participants did not know how to find a poster topic, convert visual symbols, or arrange colors, and they therefore tried to solve this problem by imitating famous designers or internationally awarded works. Such a learning process does not facilitate innovation in graphic design.



Figure 3. The example works of experimental group students
(The posters designed by Kun-Yan Tsai and Tian-Shu Huang)



Figure 4. The example works of control group students
(The posters designed by Sin-Hui Lin and Gang-Jie Tsui)

6. Conclusion

A close examination of current digital media design and graphic design works demonstrates that VCD has gradually lost its artistic originality and diversity in the topics covered. Technological convenience has unconsciously encouraged designers to pursue visual effects and overlook the communication of messages. In fact, the purpose of VCD is to convey an implicit concept to the audience and achieve an emotional exchange. However, graphic design works in Taiwan have suggested the opposite trend in recent years. This study showed that innovation in design education is helpful for assisting design students to value the intrinsic nature of VCD, disregard conventional thinking modes, and explore creative visual concepts from various perspectives. The concept of narrative was applied to graphic design by incorporating narrative theory into the curriculum and training students to tell a lively and entertaining story on a single page. This approach may effectively spark their creativity and imagination and serve as an innovative teaching method for VCD.

Nowadays, design education is particularly crucial for the cultural development in society because VCD possesses a potential influence on the way people create cultural value. Design education in any field is closely associated with the cultivation of design creativity, which is the core of design education. Sternberg (1999) regarded creativity as a major power for establishing knowledge-economy societies and creative thinking and problem solving abilities as important skills that will become necessary for global citizens. Overall, since its emergence in the 1980s, VCD has encountered a new challenge in Taiwan over the last few years. This challenge is the noticeable similarities in visual design work, which has become a prevalent problem in the Young Designers' Exhibition in recent years. Therefore, instructing students to pursue creativity in visual design has become a common goal for instructors. Moreover, the present study suggested that design education must be adaptive to this era of constantly evolving technologies. The application of theories or principles from other fields to graphic design course content will definitely improve students' learning outcomes.

Finally, design education is a comprehensive discipline that not only involves innovation, cultural exchange, technology, information, and integrated functionality, but also is closely associated with innovative thinking, technological application, cultural values, and information transmission, thereby exhibiting critical and long lasting effects on any country's industrial development and transitioning. In recent years, numerous new VCD departments have been established in Taiwan without updating their curriculum design. Many VCD departments have continued the conventional teaching mode of fine art education without formulating innovative and logic-based teaching methods, rendering students to solely rely on their own artistic talent to find inspiration for creative concepts. In fact, creativity does not necessarily require artistic talent but originates from observation of culture and everyday life. Therefore, this study applied narrative theory from linguistics to a graphic design education program and established an unconventional teaching model, allowing students to elicit their visual design creativity by observing daily news or stories. The objective of this teaching experiment was to introduce new perspective for VCD instruction.

Acknowledgements

The authors gratefully acknowledge the support for this research provided by the Ministry of Science and Technology of Taiwan under Grants No. MOST 105-2410-H-131-004-. Furthermore, the authors also thank Mr. You-Sian Chen for being a teaching assistant, who assisted students to create posters in this study.

References

- Agrawala, M., Li, W., & Berthouzoz, F. (2011). Design principles for visual communication. *Communications of the ACM*, 54(4), 60-69. <https://doi.org/10.1145/1924421.1924439>
- Aylett, R., & Louchart, S. (2003). Towards a narrative theory of virtual reality. *Virtual Reality*, 7(1), 2-9. <https://doi.org/10.1007/s10055-003-0114-9>
- Babb G. (2002). Where the bodies are buried: Cartesian dispositions in narrative theories of character. *Narrative*, 10(3), 195-221. <https://doi.org/10.1353/nar.2002.0017>
- Bal, M. (2009). *Narratology: Introduction to the theory of narrative*. Toronto: University of Toronto Press.
- Williams, B. (2009). Life as narrative. *European Journal of Philosophy*, 17(2), 305-314. <https://doi.org/10.1111/j.1468-0378.2007.00275.x>
- Catterall, J. S., & Pepler, K. A. (2007). Learning in the visual arts and the worldviews of young children. *Cambridge Journal of Education*, 37(4), 543-560. <https://doi.org/10.1080/03057640701705898>
- Findeli, A. (2001). Rethinking design education for the 21st century: Theoretical, methodological, and ethical discussion. *Design issues*, 17(1), 5-17. <https://doi.org/10.1162/07479360152103796>

- Fludernik, M. (2007). Histories of narrative theory (II): From structuralism to the present. In: *A companion to narrative theory* (Chapter 2), Phelan, J. & Rabinowitz, P. J. (Eds.), 36-59, New Jersey: John Wiley & Sons.
- Genette, G. (1983). *Narrative discourse: An essay in method*. New York: Cornell University Press.
- Herman, D. (2007). Histories of narrative theory (I): A genealogy of early developments. In: *A companion to narrative theory* (Chapter 1), Phelan, J. & Rabinowitz, P. J. (Eds.), 19-35, New Jersey: John Wiley & Sons. <https://doi.org/10.1017/CCOL0521856965>
- Landa, J. A. G., & Onega, S. (2014). *Narratology: An introduction*. London: Routledge.
- Lerner, F. (2005). Foundations for design education: Continuing the Bauhaus Vorkurs vision. *Studies in Art Education*, 46(3), 211-226. <http://dx.doi.org/10.2307/3497081>
- Lester, P. M. (2013). *Visual communication: Images with messages*. New York: Cengage Learning.
- Liu, M. (2008). Application of integrating narration into creative storytelling teaching model. *Journal of Chinese Language and Literature of National Taipei University*, 4, 1-34. [Publish in Chinese]
- Louchart, S., & Aylett, R. (2004a). Narrative theory and emergent interactive narrative. *International Journal of Continuing Engineering Education and Lifelong Learning*, 14(6), 506-518. <https://doi.org/10.1504/IJCEELL.2004.006017>
- Louchart, S., & Aylett, R. (2004b). The emergent narrative theoretical investigation. In: *The 2004 Conference on Narrative and Interactive Learning Environments* (21-28).
- McAdams, D. P. (2006). The role of narrative in personality psychology today. *Narrative Inquiry*, 16(1), 11-18. <https://doi.org/10.1075/ni.16.1.04mca>
- Pavel, T. G. (1980). Narrative domains. *Poetics Today*, 1(4), 105-114. <https://doi.org/10.2307/1771889>
- Polkinghorne, D. E. (1989). Narrative knowing and the human sciences. *American Journal of Sociology*, 95 (1), 258-260. <https://doi.org/10.1086/229259>
- Roberts, G. (2001). *The history and narrative reader*. Hove: Psychology Press.
- Smith, B. H. (1980). Narrative versions, narrative theories. *Critical Inquiry*, 7(1), 213-236. <https://doi.org/10.1086/448097>
- Sternberg, R. J. (1999). *Handbook of creativity*. Cambridge: Cambridge University Press.
- Tseng, C. H. (1996). A Discussion on Visual Communication Design. *Commercial Design*, 69, 60-64. [Published in Chinese]
- Yang, Y. F. (2009). A discourse of narrative design in architecture aesthetics. *Journal of Architecture*, 69, 155-168. [Published in Chinese]
- Yang, C. M., & Hsu, T. F. (2015). Applying semiotic theories to graphic design education: An empirical study on poster design Teaching. *International Education Studies*, 8(12), 117-129. <https://doi.org/10.5539/ies.v8n12p117>
- Yang, C. M., & Hsu, T. F. (2017). Applying narrative theories in the design of public-cause posters: Process and educational implications. *Advances in Social Sciences Research Journal*, 4(4), 80-91. <http://dx.doi.org/10.14738/assrj.44.2785>