VISUAL LANGUAGE SKILLS – DO BUSINESS STUDENTS NEED THEM

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ABSTRACT

The use of visual images is an effective means not only to communicate with but also to elicit emotions from and to influence the masses. Present-day computer tools have removed the need for specialized equipment and personnel for the design and preparation of visual images. With globalization and the increasingly visual economy, there is an urgent need to develop visual literacy skills in business students. This paper discusses the cognitive benefits of learning the visual language. Through the experience from a general elective course at Nanyang Technological University, it studies the pedagogical approaches to the nurturing of visual language skills in undergraduates. Specially highlighted are the outcomes of the business students' performance which were found to be very promising. Although nearly all of them had no background in the visual art prior to taking this course, the majority of them have the innate ability to acquire the basic concepts of the visual language and to apply these effectively in their design projects. Two of these projects are illustrated in this paper as examples of students' works. This paper concludes with a reflection on the urgency for the training in visual language for our future workforce to compete in the new age.

JEL: I20

KEYWORDS: Visual Language, Visual Literacy, Business Education

INTRODUCTION

We live in a visual economy. Visual images exert tremendous impact and influence in the way we conduct our businesses and our lifestyles. They are the driving forces behind marketing and communication. Yet the development of competency in the visual language has traditionally only been for artists and designers.

This paper begins with the reasons for the need for training in the visual language and the significance of nurturing artistic intelligence in our undergraduates. The cognitive benefits of learning the visual language are highlighted. Next, the approach taken by Nanyang Technological University (NTU) for the development of such skills is discussed using as an example a general elective course which aims at developing an understanding of, and competency in, the visual language in business undergraduates. Presented are the pedagogical approaches used to develop in the students their abilities to see in a new way, to perceive with the intent of finding meaning, to move fluidly between verbal and visual modes of thought, to engage in problem solving, and to create visual messages that have impact. This is followed by a discussion of the outcomes as reflected by the achievements of the students. Presented are the composition of the class including, the various disciplines the students came from, the performance of these students according to the different disciplines in the analyses of graphic images and the results of their creative design works. This paper concludes with a reflection and implication on the urgency for the training in visual language especially for our Business students to compete in the new age economy.

LITERATURE REVIEW AND BACKGROUND

Why learn the visual language? In the 2008 Global Financial Centers Index, Singapore ranked third in the world behind New York and London ("S'pore rises to No.3," 2008). Singapore now finds itself having to compete head-on with the best economies in the world. To enable it to compete with the best economies, it needs to recognize that its economy depends upon ever increasing consumption, including imagery consumption (Harvey, 1989). Visual images have the power not only to inform consumers, but to influence. They create the consumers' needs and also have the power to satisfy those needs.   Edmund Feldman, Professor of Art went on to say that the entire history of art testifies to the communicative power of man-made images (Feldman, 1978). However, the training of visual language skills in schools for the young lacks behind the accelerated growth of the visual economy and is directed almost solely to those aiming to be artists and designers. The majority of graduates, especially business graduates who will be the future driving force for the economy, have been and are entering the workforce lacking in the necessary literacy in the visual language. It must be understood that business and communication strategies that take full advantage of the power of the visual language have much to gain in our visual economy. Our young need to be equipped with this new skill to gain the competitive edge when they enter the workforce.

What is this visual language and what is its significance? According to Wikipedia, "a visual language is a set of practices by which images can be used to communicate concepts." Art educationist Mary Stankiewicz described "visual art as language and literature, as a means of expression and communication as well as a body of knowledge, more furniture for the mind" (Stankiewicz, 2000). Edmund Feldman once said, "Art is a language of visual images that everyone must learn to read…an individual who cannot understand or read images is incompletely educated. Complete literacy includes the ability to understand, respond to, and talk about visual images" (Feldman, 1982). To render the language of the visual arts comprehensible and to secure meaning from the visual forms, "one must understand the symbolic and syntactical forms they present" (Eisner, 1971). An understanding of the visual language can lead to the development of artistic intelligence which Rudolf Arnheim referred to as the "intelligence of visual perception" (Arnheim, 1969). This artistic intelligence can be nurtured in the classroom for all students as a part of the general education, a position held by the NAEA and many educators (Benz, 1968; Kohl, 1981; Schubert, 1986). Much research has been done and literature written from Jean Piaget to Richard Suchman on the cognitive processes and development through instruction (Suchman & Aschner, 1961), and on the significance of nurturing artistic intelligence (Arnheim, 1969; Bruner, 1961; Eisner, 1967). Ann Barry further advocated the need for "critical visual awareness" which she defined as "visual intelligence", a capability which can be "developed and exercised in order to think more creatively and to better comprehend the pattern of forces that govern our existence" (Barry, 1997). It is based on this background and understanding that the following general elective course was designed to nurture the artistic intelligence in students, namely, the ability to see in a new way, to perceive with the intent of finding meaning, to move fluidly between verbal and visual modes of thought, to engage in problem solving, and to create visual messages that have impact. It is structured for non-art and design students through the learning of the visual language.

APPROACHES FOR THE TRAINING OF VISUAL LANGUAGE AT NTU

This paper studies the development of visual language skills in a general elective course entitled "Creative Use of the 2D Media". Approved by NTU's Academic Board, this 3-academic unit course was introduced in the July 2002 semester.   It is available as a general elective to all NTU undergraduates with the objectives of inculcating visual literacy in the students. The course aims to lay the foundation for their visual perception – how they make sense of images, how they recognize, interpret and analyze visual messages, how they develop their aesthetic sense, how they become more visually aware and more sensitive to their surroundings, and how they can become more effective visual communicators. Demand for the course from students has been very high and the course in one class section has been offered and

fully subscribed every semester since it was introduced. The demand is such that the maximum class size allowed has been increased from 40 to 50 for the last three years. The majority of the students who elected for this course are Business, Accountancy and Engineering students. Surveys on students enrolled in this course indicated that the majority of them had very little or no background in the visual arts when they elected for this course. Students attend a 3-hour lecture-cum-tutorial session every week for 12 weeks. The following is the learning experience of the author, who has taught this course since its inception.

Learning to See in a New Way

In this course, students are first introduced, through carefully selected examples, to the persuasive power of visual images and the impact they have on how we think and feel. They learn the art of seeing purposefully and in a new way. This approach follows that of Aldous Huxley, author of the *Brave New World,* who summed up his method for achieving clear vision with the formula: "sensing + selecting + perceiving = seeing" (Lester, 2001). To him, to sense is to let the eyes and the nervous system do their work. Then comes selecting which is to isolate a specific part of a scene to focus on. It is a conscious, intellectual act. Finally, to perceive is to make sense of, and find meaning in, what one selects. This calls for sharper mental activity. This combination of sensing and mental activity is the art of seeing, an approach also espoused by well-known theorist Rudolph Arnheim, who argued that perception itself is cognitive. It involves "active exploration, selection, grasping of essentials, simplification, abstraction, analysis and synthesis, completion, correction, comparison, problem solving…" (Arnheim, 1969).

Following the introduction to the art of seeing in a new way, students learn the underlying elements and principles of design which are the language of images. They learn to understand how these can help them to perceive, and subsequently to interpret, the visual messages. As Ann Barry, in her book *Visual Intelligence*, so aptly put, "The language of images, grounded in the stuff of perceptual experience, affects us directly and involves instincts and emotions, before the linear logic derived from language can be imposed on it" (Barry, 1997). Students thus learn that design elements such as a line can create a mood and can be used as an organizer and to add texture; that a shape can sustain interest, organizes and be a conceptual tool; that a type can convey mood, implies meaning and can be used to create shapes; and that texture, being the visual and tactile surface appearance, can be used to strengthen a design idea. They learn that color and value can create mood, draw attention, create movement and direction, and can also have cultural connotations and emotional appeal. Students also learn the basics of the design principles which state that the proper structure of the design elements can have a significant impact on the viewer. For example, elements that are placed to achieve balance create a more stable mood as opposed to the tension created by unbalanced elements.   Different elements in sizes, shapes, textures, values and colors can be used to create contrast to strengthen an idea. Unity is the skillful coordination of design elements so that each works well with the others to achieve "the whole is greater than the sum of its parts". The composition of elements in the foreground, middle ground and background, and lightness and darkness can create depth and illusion of perspective. Students are also introduced to the concept that visual hierarchy creates eye movement for the viewers and allows visual messages from a single image to be prioritized.   Manipulation of positive and negative space makes all space active, interactive and interdependent, and can be used to imply meaning (Peterson, 1996; Landa, 1998). In addition, Gestalt theories remind us that vision is a creative experience, not simply an act of seeing. Our eyes group information by similarity, proximity, continuity and common fate. A page must be looked upon as a unified whole, the sum of all the parts (Lester, 2001).

Students are also exposed to a brief history of the design movements from the Arts and Crafts Movement to Post-modern (Heller & Chwast, 1988). The aims are to identify the visual language used in the various design conventions of the past and to learn from tradition the reasons for the strategies, styles, techniques, and past solutions to recurring design problems. An illustrated example is *Surrealism,* a style that had

pervasive influence on luxury product advertising in the twentieth century. Students are shown how surrealistic imagery in ad which combines highly realistic style and reality-defying content is a particularly effective way of attracting the spectator's eye. A commercial for Tagheuer watch *Success is a Mind Game* is highlighted to illustrate how surrealistic images are continued to be used in today's commercial and are modeled deliberately on the works of well-known surrealist painter like René Magritte – high art to high quality watch.

Through more illustrated examples, students further learn how to perceive visual images created by advertisers with the intent to persuade. This form of visual persuasion encompasses its own sets of visual language found in the semantic and syntactic properties of images. The type of semantic properties of images classified by American philosopher Charles Sanders Peirce as iconic and indexical signs is adopted in this course. Peirce's system of iconic sign which is characterized by some form of similarity or analogy between the sign and its object is firstly introduced (Messaris, 1997). Many examples are projected on the screen in the classroom to enable students to identify iconic signs. They are followed by examples of iconic signs that advertisers used to add meaning over and above the message in an ad. Discussed are the intended objectives of the advertisers to attract attention, elicit a desire and reaction and/or change opinions in order to induce a behavioral change or action on the target audience. Students' attention is drawn to the implications from imagery that deploys, for example, sex and gender; style and social status, style and youth; surrealism and visual metaphor and violation of reality. They also learn that the technical orientation of the subject in an image which can also alter the perception of the viewer. For example, a subject viewed from a low angle projects a more authoritative look while a child viewed from a high angle gives a subservient look; a close-up shot enhances details while heightening the drama; and a head-on with direct eye gaze draws viewers' immediate attention.

Peirce's system of indexical sign which is caused by its object and serves as a physical trace pointing to the object's existence is then introduced. Images in photographs, videos and films are classified according to Peirce's category of signs produced as physical traces of their objects (Messaris, 1997). These images are often used by advertisers as documentary evidence of an advertisement's point. Examples of photos and videos showing interviews of satisfied customers imply a product's approval and when a celebrity is used in an ad, his/her endorsement of the product is implied.

Following the semantic properties of images, students are introduced to the syntactic properties of images, another form of visual persuasion frequently used by advertisers. This is what Paul Messaris called visual syntax. It is concerned with the interrelationships among the elements in visual images as they combine to form larger meaningful units. Students are drawn to the understanding that when images are juxtaposed next to one another, a connection between these images can be created in the viewer's mind to imply analogy, causality, contrast and/or generalization (Messaris, 1997). Advertisements and TV commercials are used as examples to help students understand these concepts. At the same time, students are called to share what they think are the conceptual connections created by these advertising images. One of the examples used is the commercial by Apple Computer for its first launch of Macintosh in 1984.

Students also learn how products are packaged to communicate their value to their targets and to serve as silent salesmen. Some of the marketing tactics contemporary designers use in packaging design are illustrated. For example, for products that claim to be pure and natural and possess certain eye appeal, the use of clear containers to allow the 'natural' color of the food to come out, and the use of design labels that project healthy and homemade environments are added on to further appeal to those who are health conscious. Other illustrative examples are used to show how colors, fonts, illustrations, and photographs are employed in contemporary packaging to infiltrate the consumer's body, mind and soul, and to appeal to the shopper's social status and lifestyle (Heller & Fink, 1996). Graphic pattern or image called *Product Uniform* designed to be seen on packaging over long distance, together with the approach and the distance at which key messages must be legible on packaging referred to as *Effective Reading Sequence*

are highlighted and illustrated (Judd, Aalders & Melis, 1989). Their aims are to secure consumer's attention and to reduce the competition from the adjacent brands on the shelves in the retail settings.

To distinguish visual images used by advertisers with the intent to persuade and images used by journalists for news reporting, a lesson on photojournalism is introduced. Examples of world-renown news photographs are highlighted to illustrate the power of the single image that is able to lodge permanently in the viewer's memory and reproduced across the world thousands of times. Eddie Adams' frozen moment of the street execution of a Vietcong officer and the piercing eyes of Sharbat Gula, the young Afghan girl who appeared on National Geographic's cover are two of these examples. Students also study how good news photographs communicate based on content and form (Evans, 1997) and how visual truths and visual manipulations can occur in photojournalism.

Throughout the lecture-cum-tutorial sessions, visual images and commercials are used heavily as examples. They are projected onto the large screen in the classroom to act as illustrations, to draw attention and create interest and to create a memorable experience for the learners. Classroom sessions are designed to be highly interactive. Students are asked thought-provoking questions to draw out their comments and responses before being introduced to the subject knowledge. Questions are also used to guide and help students to perceive visual images. Special efforts are made to use a lot of witty remarks to create a fun and interesting learning environment.

Perceiving with the Intent of Finding Meaning

During the course, students are encouraged to find meaning in a visual image and to interpret the visual message intended. This requires a higher level of cognition with regards to understanding the content, context and connotation. Terry Barrett, art critic-in-education argued that to interpret is to respond in thoughts, feelings and actions to what we see and experience, and to make further sense of our responses by putting them into words. Students are thus given the opportunity to discover for themselves the truth of the principles for interpretation put forward by Barrett, some of which are: "Interpretations are arguments…are persuasive. No single interpretation is exhaustive of the meaning of artwork and there can be different, competing, and contradictory interpretations of the same artwork. Interpretations are not so much absolutely right, but more or less reasonable, convincing, enlightening, and informative. Good interpretations have coherence, correspondence, and inclusiveness. Feelings are guides to interpretations…" (Barrett, 2000). So the act of interpretation is to build meaning to what we see and to use words to convey our thoughts and to share with others (Cromer, 1990). Michael Parsons went further to say that "artworks must be interpreted" and that "artworks are constituted as meaningful objects by both visual and linguistic materials of thought in interaction" (Parsons, 1998). Edmund Feldman summed up the discourse in teaching art which revolves around ideas and feelings we comprehend with our eyes. He contended that without a prior act of criticism, or visual interpretation, no really significant teaching can take place (Feldman, 1978).

Training to Move Fluidly between Verbal and Visual Modes of Thought

After five weeks into a semester, each student is given the opportunity to practice his/her perception and interpretation of a visual image selected by him/her. Each student then takes turn to verbally present to the class his/her analysis of the graphic image. Some of the questions students have to answer in their analyses are: "What is the message?", "Does it communicate a clear message?", "Does the visual form have any impact?", "Whether it makes effective use of design elements and design principles in its layout?", and "Is it a creative solution and why?" Comments from their peers are encouraged so that different approaches to interpretations are shared and learnt. Comments from the lecturer are also given in class and later by emails. Students also have to submit their analyses in writing. The objective is to sharpen their visual, verbal and written analytic skills enabling their verbal and visual modes of thought to move fluidly from one to the other.

The students' analytic skills in visual image are again assessed during the examination at the end of the semester. One of the questions which counted for 40% of the final grade is to perceive and interpret the visual message of a given graphic image based on content, context and connotation using the design elements and principles. Students have two hours to write their analyses and at the same time answer two other short essay questions on their understanding and comprehension of the subjects learnt in the course.

Engaging in Problem Solving

During the semester, students form themselves into groups of four each. Their assigned projects involve hands-on creation of the promotional materials for an event, a company or a new product using a poster and an invitation. They have to work in a group to firstly define the design problem and to analyze it. They then brainstorm to generate possible solutions, analyze each of these solutions and select the best creative solution for their final design. When coming up with the creative solution, they need to work out the purpose of the message, the target audience and write the appropriate headline and body copy. For the design of the visuals for the message, they need to work towards an original and creative solution and also be concerned with good and appropriate use of design elements and principles. Their final design submissions can be either using the computer or any other materials such as paper or cloth cuttings, collage or color pencil illustrations.

Finally, they are required to present their solutions in class in addition to a written report. The report is expected to include how the group came up with the creative solution for the project; the intended message to be communicated; the visual form employed to create impact and how and why the design elements and principles are or are not employed in the design layout. This provides students the opportunity to further familiarize themselves with the visual language they have learnt and to apply it to their solutions in both visual and verbal form. This act of creating encourages students to explore their ideas, feelings, and experiences and synthesize them into meaningful visual and verbal expressions. Comments from their peers and lecturer are employed to challenge and strengthen their arguments. The goal is to nurture effective visual communicators who can produce powerful images that others can understand and remember (Lester, 2001). Also required in the report is one paragraph on individual contribution to the project. This is to enable appropriate assessment of individual effort.

STUDENTS' PERFORMANCE

Analyses of Graphic Images

The average performance of the students, according to their major, in the analyses of graphic images was studied for years 2006 to 2008. Their performance in percentage scores during the course (CA1 or continual assessment 1) and during the examination is shown in Figure 1 and Figure 2 respectively.

Based on the results in the year 2006 to 2008, it was found that for the coursework (CA1) which involved verbal and written analysis of a graphic image of the student's choice, there is no statistically significant difference in the performance of students from the different disciplines. However, Business/Accountancy students scored slightly better than the rest. Business and Accountancy students scored an average of 77%; Engineering students scored 73% while Communication Studies/Humanities students scored 75%. For the examination which involved only written analysis of a given graphic image, Business and Accountancy students scored an average of 74%; Engineering students 70% and Communication Studies and Humanities students 76%.
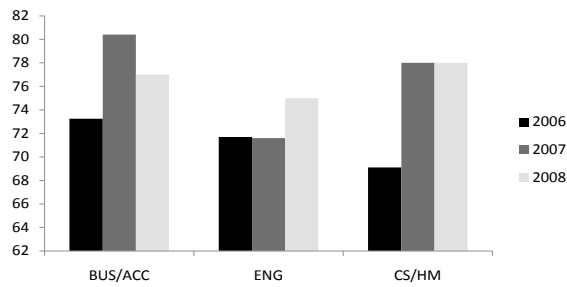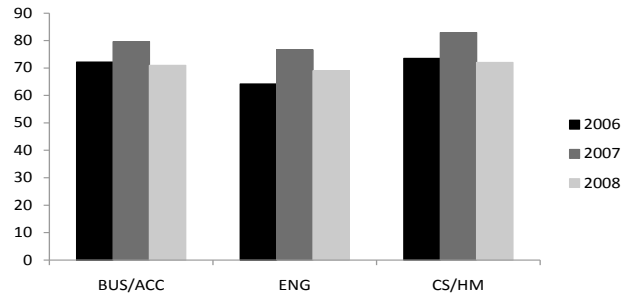
Figure 1: Students' Analyses of Graphics in CA1

Figure 2: Students' Analyses of Graphics in Exam

This figure shows the % scores in CA1 by Business/Accountancy BUS/ACC; Engineering ENG; & Communication/Humanities CS/HM students.

This figure shows the % scores in the exam by Business/Accountancy BUS/ACC; Engineering ENG; & Communication/Humanities CS/HM students

Figure 3 shows the performance of the students in analysis skills. 45% of the students did an excellent job in identifying the message of the visual image while 6% did poorly. When identifying the design elements and principles, 47% did an excellent job while 8% did poorly. On their ability to interpret, 35% put forth arguments that were persuasive, reasonable, convincing, enlightening, and informative while 22% lacked these qualities and were inclined to describe what they saw rather than attempting to put forth an argument. The rest of the students performed in the acceptable range.

Figure 3: Performance of Students in Analyses Skills
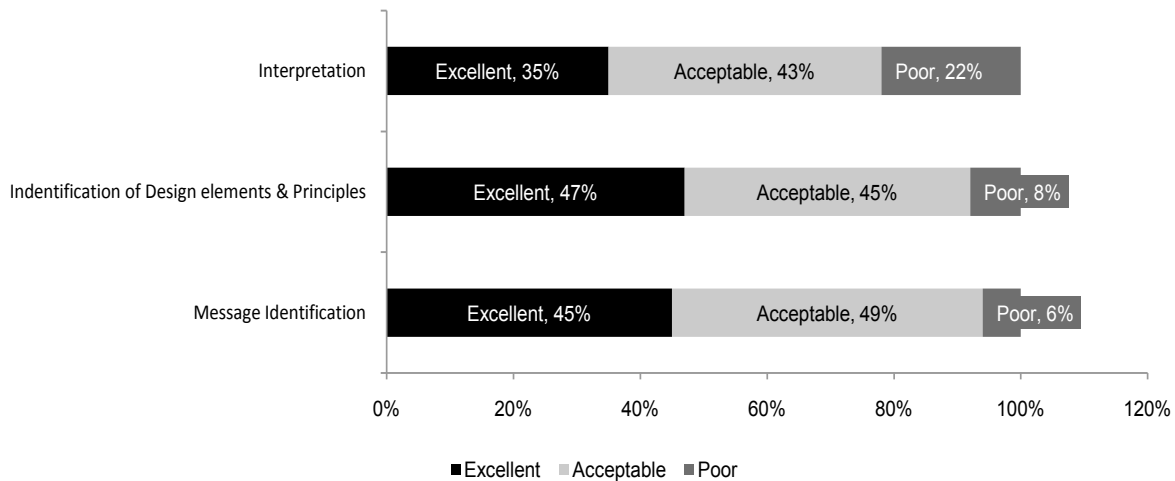
This figure shows students' perception in identifying the message and design principles and their ability to interpret.

From their performance, it can be concluded that the majority of the students, although without any prior visual language background, had no difficulty in identifying the message, and the design elements and principles used in the visual form. For visual interpretation, which called for a higher level of cognition to understand the content, context and connotation, and to express the argument in a convincing manner, fewer students were able to do as well. Most students also fared better in the coursework than in their final examination. This could be due to the pressure and the limited time given in the examination. Furthermore, in the coursework both the students' verbal presentations and their written analyses count whereas in the final examination only the written analyses can be assessed. Business and Communication

Studies students generally scored slightly better than Engineering students. This could be due to the nature of the former's subjects which require more reading and writing while Engineering subjects tend to require more numerical understanding.

<u>Creation of Design Works</u>

For the hands-on group projects, 54% of the teams showed good understanding of what constituted creative design using appropriate visual language to express their message. The designs and layouts were unique, artistic, surprising and full of impact. Their reports were well-written with indications of thorough brainstorming for concept and how the design evolved in the process. These projects can be said to be on par with that of professional designers. Appendix 1 and 2 show two examples of group projects in this category. The project in Appendix 1 was created by four Accountancy students, while the project in Appendix 2 was by two Business and two Linguistics and Multilingual students. From these, it is clear that all of them have applied effectively what they learnt in the course in the creation of the design works with successful results. 34% of the teams turned out works and reports which indicate that these students had the potential to be trained as designers. While they had attained proficiency in the visual language, they needed more experimentation to improve their results. The remaining 12% of the teams performed not so well, showing that they still lacked understanding of what constituted an effective message and a visual form that had impact.

CONCLUSION AND IMPLICATION

This paper first argued for the need to provide training in visual language skills in business students to give them an additional competitive advantage. It then described the work done in exploring if and how well a course on the creative use of 2D media can develop such skills in undergraduates, particularly in business students. The results show that undergraduates, in particular Business students, even though they may not have prior art or design experience, can learn the visual language well and apply this for effective visual communication. A vast majority of the students were able to identify messages and design elements and principles. They were also able to interpret the visual messages and put forth their arguments. Their creative design projects were also very promising. About half of them created design works that were on par with professional designers and another third exhibiting a potential to be trained as designers.

Basic skills in the visual language help students to see, to comprehend and find meaning in what they see and to express their thoughts in verbal, written and visual ways. These skills are essential not only in marketing services and products but in effective communication. It is also clear that almost all undergraduates have the innate ability to acquire basic concepts of the visual language and to apply these effectively, as with the verbal and written skills. The work presented here does not go into the study of how, and to what extent, the creative processes used by the teams that excelled in their creative design works are different from those used by the teams that did not do well; and whether and how these affected the outcome. Such a further study will be helpful to better refine the pedagogical approaches that can be more effectively employed in nurturing visual language skills.

In an age of intense economic competition, a business graduate equipped not only with competency in the verbal and written languages but also in the visual language will be a more effective communicator particularly when it involves the mass market. Such a graduate has acquired an additional significant competitive advantage to meet the challenges of the new economy. A follow-up study on the extent of the effect the training of visual language skills offered in this course has on the subsequent careers of the Business graduates will certainly be very useful and informative.

APPENDIX
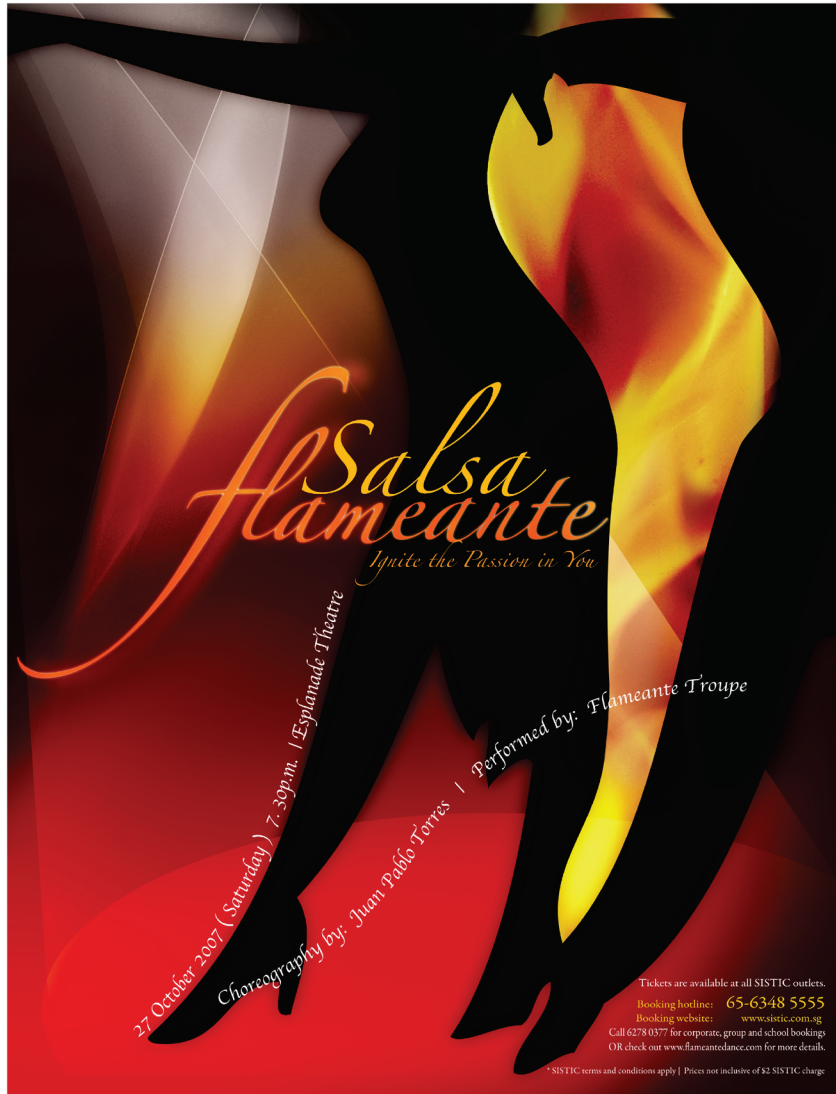
This appendix shows a poster and a flyer for the salsa dance performance by Flameante Troupe created by Lee Hong Zhen, Lim Yu Ting, Yee Jia Yin and Zhang Xiao Wei, all final year Accountancy students.

This group of students aims to create the poster and flyer to promote salsa performance by Flameante Troupe and at the same time ignite viewers' passion in salsa. Viewers can interpret the silhouettes of the man and woman in motion under spotlight as the Flameante Troupe or as themselves performing. Their theme 'Ignite the Passion in You' is well brought out by the use of warm red, orange and yellow colors, movement of the burning flames, curvy shapes of the dancers and spotlight, cursive font type and its layout. There are good applications of design principles with design elements that are asymmetrically balanced; good contrast in figure and ground and font sizes providing good visual hierarchy. Eye movement is also attained by the rhythmic structure of the layout. Positive and negative spaces are both active. No space is left dead. There is visual identity between the poster and the flyer which literally flies out of the 'match-box'. The word 'Ignite' on the 'match-box' further strengthens the theme. This group of Accountancy students have applied what they learnt in the course in the creative design of the poster and flyer with very successful results.

This appendix shows a series of 4 posters, a flyer and a manual for the launch of a new brand of leggings called 'Miss Leggings' created by Lai Lihui and Tham Sing Yee, both final year Business students; and Chong Hui Hui and Tang Hui Min, both Linguistics & Multilingual Studies students.

The message conveyed is comfortable and trendy leggings with a wide range of colors to suit the varied preferences and personalities of the young female target. The designs of the posters employed different movements and postures of the models to portray the different personalities, for example clockwise from top left, letting loose and be wild, 'delirious' look; lively, energetic and 'playful' look; demure and 'composed' look; and elegant and 'sophisticated' look. The various colored leggings also represent the different personalities portrayed. The borders of the posters and the flyer employ the same color scheme to reinforce the message and the visual identity. Different font types, font sizes, font weight and colors also reinforce the different personalities. The tagline 'Bold...can be worn' and the brand name 'Miss Leggings' are consistently reflected in all promotional materials. There is good balance, contrast, visual hierarchy and unity in the design layout. The wavy shape of the 5 folded panels of the flyer and the leggy shape of the manual remind viewers of the sleek and curvaceous legs flaunted by wearing the product.

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BIOGRAPHY

Siu-Kay Pun started her career as a graphic designer in New York City. She later spent twelve years as TV Producer/Director and later as Executive Producer at Singapore Broadcasting Corporation. She is presently a Lecturer at the School of Art, Design and Media, Nanyang Technological University in Singapore. Her research interests center on visual literacy, visual language and visual communication. Her paper "Inculcating Visual Literacy to Meet the Professional Needs of Engineering Undergraduates" won her the *Silver Award* for Best Paper.