The Role of Printmaking Processes in Art Education

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Abstract

Printmaking or graphic art is a process and methodology in teaching art, characterized with its diverse methods and techniques such as intaglio, lithography, relief, screen printing and other printing methods. The purpose of this paper is to study the effect of printmaking methods and techniques on art students' education. The discussion centers on the importance of printmaking as a medium of expression in art education and differentiates printmaking from other fine art forms. Furthermore, the study explains the working of certain psychological and physiological systems, and how they are affected and involved in the printmaking processes.

It is concluded that as a creative activity, printmaking is conductive to an artist's technical growth and expansive of an artist's outlook and sensitivity. Furthermore, art competencies learned via printmaking processes can promote the development of the aesthetic and creative process concurrent to learning and executing compositional and productive skills.

Introduction

Why do artists bother to make prints at all when their ideas can be expressed much more quickly and with less sweat in other media? What is it about printmaking that continues to fascinate artists enough to go to the trouble entailed in the process?

According to Maclean, there are two answers: The importance of work and the importance of community. For many artists, the process of making prints is part of printmaking's appeal. Some people hate the labor involved but, for others, the physical act of making a plate, printing a stone is meditative and satisfying. Maclean also presented the ability of technology to eliminate the physical labor associated with printmaking, replacing it with the use of our fingers and eyes as we punch a keyboard and stare at a screen. On the other hand, she pointed out that as society becomes more technological,

more virtual, the appeal of the hand-made, the physically-transformed and the energetic embodiedness of the print will increase (Maclean, 1996).

In addition to the appeal of printmaking labor, printmakers also have the benefit of supportive communities. Eichenberg clarified that the print studio offers ideas and inspiration, professional development opportunities and a feeling of working together for a common goal. He said, "the sense of community enjoyed by print-artists is something most others lack and… this utopian communality can become an increasingly important reason for the artist to take up printmaking" (Eichenberg, 1976, p.14).

Stanley Jones, a well-known educator and printmaker for about 40 years, was asked by the interviewer Newby about the particular things that appeal to him about printmaking. Jones noted there are certain qualities that differentiate printmaking from painting, drawing or any other media. One aspect is the time element and being able to split up an idea into components that students can actually see in a separate form. In Newby's interview article (1997), Jones said:

> …if you're doing a drawing or a painting you have a unique surface and the idea evolves on that surface. With printmaking you can review and look at the states, which is a great advantage. You can change that idea under your control. That is important and unique to printmaking" (Newby, 1997, p.8).

Also, the other physical thing is that when making an image through a printmaking press, no matter how much time the student takes up to that point, forming the color, making the matrix, or whatever, when they actually pull that color, the impression comes all at once. They're looking at it immediately (Newby, 1997, p. 8).

Another aspect about printmaking is its emphasis on technical competencies dealing with its two and three-dimensional aspects of form and expression, which provide the basis of a conceptual framework for relatedness among the arts and crafts (Tallman, 1996).

These are some of the characteristics that differentiate printmaking from the other fine art media. The following section will address the role of printmaking in the education of artists and students, and how the experience of making prints informs the development of the art students.

The Educational Role of Printmaking

Print is not a technique or a category, but it is a theoretical language of evolving ideas. The territory printmaking occupies is broad ranging and diverse. Majoring in this area leads the student of high degree of professionalism to multiple career opportunities and gives the widest possible means for self-expression. The richness of the printmaking media and its

characteristics made printmaking a suitable art form to be explored by a wide range of students in elementary, junior high and high school classes.

From age eleven to fourteen, a decline in the quality and intensity of artistic production occurs. It is caused by feeling of insecurity and a great interest in activities outside the artistic realm, including pressure to learn academic disciplines (Tallman, 1996). Through experience, it was found that drawing exhibits attempt to become more literal and are less expressive of inner thoughts and emotions, while printmaking can fill important needs of this age group. Keith Howard stated that printing is particularly effective in the intermediate grades when creative behavior appears to decrease. He believes that due to the opportunities for invention and exploration with materials, the majority of pre-adolescents can find success, thereby building confidence and renewed interest in the art expression that will lead to creative growth. Furthermore, the craft aspects and steps in producing a print will supply the early adolescent with a structural context, art skills, and personal growth can be developed (Howard, 1993).

Upon moving into adolescence, this group holds a great potential for creativity, since the individual becomes more attuned to styles and composition as a basis for artistic expression. Therefore, artistic production is most common among this age group (Saff, & Sacilotto, 1978). Mcfee has proven that creativity can flourish and grow by printmaking processes in the adolescent at the nine-grade level. Over a six-month period, ninth graders were given creative tasks and problem-solving in monoprinting and in design. The test group made marked advances in the creative traits of fluency, adaptive flexibility and originality (Mcfee, 1974).

Printmaking is not as direct as painting or drawing since it requires the making of plate or matrix before the final image is obtained. Printmaking is characterized with its diverse techniques such as lithography, etching, relief printing, screen-printing and digital printing. Each method of expression cites functions in a unique and vital way, involving a series of evolving ideas in which thinking, feeling and making are brought together as inseparable components in the educational and creative process (Merrill, 1995).

On the other side, some have asserted that printmaking education has been largely deficient in the education of artists. Riva Castleman, a curator of prints at the museum of modern art stated in Lyons' article "I don't see printmaking and never have as a way of working out the basic problems of art. It's too fraught with other technical problems" (Lyons, 1997, p.24). Castleman claimed that the slow, laborious requirements of learning techniques in printmaking impeded the aesthetic and conceptual development of the student artist. Prints were, in her opinion, a medium, which any artist should pursue, only after achieving a mature style (Lyons, 1997).

Given Castleman's perception that learning technique retards the aesthetic development of the art student, I would assert that the technical demands of printmaking are no more arduous than any other disciplines such as sculptors, and that a working knowledge of technique allows the artist to make deliberate choices as an artist. Without such knowledge, art students tend to repeat what is already familiar, reducing their sphere of choices and options. Ross, Romano, and Ross, the authors of the complete printmakers, mentioned that due to extensive process factors, printmaking expands opportunities for cognitive function (associated with logical thinking and memory), psychomotor function (associated with movement and coordination), and affective function (associated with feelings and emotions) to develop and meld with the creating process (Ross, Romano, and Ross, 1990). Furthermore, Tallman clarified that the tactile skills that are developed by working with tools, glues, inks and rollers, and the organization necessary to complete a work are helpful to the student and these aid in the maturing and developing of the student (Tallman, 1996). Ross, Romano, and Ross wrote, "A successful project in printmaking will build confidence which can lead to increase self-esteem, which in turn can have positive effects on the students look toward other subjects" (Ross, Romano, & Ross, 1990, p.329).

There are two specific strategies in printmaking that have the potential to accelerate the formal and conceptual development of the student artist: first the formal and conceptual exploration through monoprinting, second, group learning through collaboration. Each of these strategies complements the other to provide important experiences for the education of the students (Lyons, 1997). Lyons also defined monoprinting as placing an emphasis on producing monoprints, while the printmaking student is capable of making dozens of unique and variable color images, achieving both a quantitative and a qualitative step forward, where a student in painting may be able to complete three or four canvases in a term. For example, intaglio methods or lithography has much potential for image variation, by altering the plate through inking and wiping differently for each impression (Lyons, 1997).

Concerning the other strategy, which is the collaborative learning, Pretice has written, "collaborative works resulting from a dialogue are viewed with suspicion, as diluted, having no unique identity" (Pretice, 1993, p.285). On the other side, Carpanini, the president of the royal society of painter-printmaker, explained that collaborative learning could be a useful approach in printmaking instruction, since students learn from each other while also allowing the teacher to function as a participant (Carpanini 1997). Most print collaborations occurred at various levels of creative activity and at various times in the creative process.

Through my experience as a printmaking instructor, I have often found this sort of learning (collaborative learning) effective especially in intermediate and advanced courses as a way to begin a semester, introducing a new technique as well as building a positive class dynamic. Cohan said:

"By working in a group, active, hands on instruction and problem solving can take place. Group collaboration provides a mechanism for students to engage in dialogue about shared decisions and choices while a project is in progress" (Cohan, 1993, pp.9-11).

The following parts will discuss the influence of printmaking methods on aesthetic and creative development, learning compositional and productive skills, and learning to draw via printmaking processes.

Aesthetic and Creative Development through Printmaking Processes

The president of the Royal Society of Painter-Printmakers, Carpanini, wrote, "…there can be no doubt that the original print is now firmly placed as one of the most vital and continually evolving methods of pectoral expression available to visually creative individuals" (Carpanini, 1997, p.6).

Viktor Lowenfeld is one of the art educators who distinguished the influence of printmaking in aesthetic and creative development. He explained that there are certain psychological systems that affect and are involved in the printmaking processes, which can give rise to personal and artistic development, as effects creative behavior, and how creativity and craft interact throughout the steps and stages of print production (Lowenfeld, 1970).

The developing system (feeling, making, and perceiving), existent from birth, evolves and integrates throughout life. It's through encounters with expressive media such as visual symbols, products, tasks or material that the three systems interact and fuse. First, the act of making an aesthetic object evokes the perceiving system. Then, the feeling system is evoked as the artists reach out towards achieving harmony, balance, and rhythm. The production of symbolic objects instigates the functioning and developing of inner systems. Feelings precipitate the need for making which, in turn, arouses feelings of degrees of fulfillment upon perceiving the stages of the symbols development. This cycle continues until intentions are satisfied. As a result of the cycle, an inner system and processes are developed as aesthetic products are developed and created in terms of the individuals' feelings and perceptions (Lowenfeld, 1970).

Needs and interests are reflective of psychological and physiological development and are manifested in particular forms of artistic expression (Tallman, 1996). Printmaking is a creative artistic form; its techniques and processes would facilitate personal and artistic development. Gascoigne argues that through plate and printmaking processes, aesthetic and creative development can be facilitated. Printmaking processes present an order for stages in the creating process. In addition, printmaking amplifies opportunities for invention due to the close relationship and interaction of craft and creativity facilitated by aspects of plate-making (Gascoigne, 1986).

Having learned basic techniques, the artist can playfully enact invention with tools and materials. Through chemical and physical experimentation with the printing surface, new imagery may appear that can change the original direction of the artistic statement (Hayter, 1981).

Stanley William Hayter, a British painter and graphic artist, had provided a powerful example of how printmaking processes can elect an artistic invention and heightened aesthetic sensitivity. He clarified that the real work of an artist is to build up an experience that is coherent in perception while moving with constant change in its development. While these benefits accrue to all media in art production, due to printmaking's mandates for order and exactitude, coupled with provisions for free expression, its processes can be more facilitative to the development of the artist and the artwork (Hayter, 1981).

Artistic growth is achieved with each plate and edition provided that the artist functions as both the creator and executor of the work. In this manner, imagination and craft processes became mutually stimulating. Follwing Hayter, the artist allows the mind and material to interact, as the image evolves on the plate. The artist then perceives what has happened and proceeds consciously to control the direction of the images, development with tools, materials, and process. In this manner, accidents can be utilized as a form of unconscious invention (Anderson, 1990).

Hayter stated, "Accident that can be dominated by intention is especially significant in the printmaking processes due to the indirectness inherent in the platemaking methods" (Hayter, 1949, p.268). Anderson acknowledged that it is this spirit of experimentation in combination with capable control that transforms the haphazard into the aesthetically creative work. Platemaking of printmaking methods, when approached in this playful yet controlled manner can encourage integration of disparate psychological and physiological processes (Anderson, 1990).

The printmaker-educator, Mauricio Lasansky, concurs with Hayter's theories and believes the metal plate to be the most facilitative for student learning, due to many possibilities of using methods to create imagery provided by the range from precision to accident, which can be utilized within engraving methods (Rabinowitz, 1977). Contemporary printmaker, David Kaminsky, utilizes the benefits of imagination in interaction with execution by allowing the free movement of chemical solutions over the printing surface (Baro, 1979).

Through the imagining processes, steps in the technical processes, and aesthetic decisions in the evolution of the visual statement comes the melding of craft and creativity. It is here that the learner integrates the aesthetic and creative experiences with theoretical, mechanical, and technical learning and skills.

Compositional and Productive Skills as Facilitated by Printmaking Processes

Compositional thinking received much attention toward the turn of the nineteenth century. Arthur Wesley Dow, Denman Ross, and Ernest Fonellosa all developed theoretical construct to develop the working of inner processes toward a higher level of art appreciation and production (Feldman, 1987). In Dow's theory, he advanced the element of harmony, line, and the principles of composition, and repetition as a system by which the art learner's process of joining ideas and emotion may be facilitated. On the other hand, Ross's theory presented a triad of art principles: harmony, balance, and rhythm (Turner, 1960). Both theories have widely influenced current compositional thinking and art learning.

Fenellosa and Dow together developed a method of teaching composition via the use of different printmaking forms, such as relief processes, intaglio, and planographic methods. They attested that through the separation and sequence used in executing and proofing the plate, students learn color and compositional theory as a structure for artistic and aesthetic decision making (Feldman, 1987).

The art teacher, Susan Post, gave further evidence of the use of printmaking methods in teaching the compositional approach. She used a similar approach to that of Dow and Fenellosa; Post has observed, "in route, the process becomes a learning experience in terms of enlarging the student's knowledge of value, color, shape within a shape, transparency, line, and texture" (Post, 1975, p.27). Furthermore, Post clarified that there is much artistic growth through organic development, as the students not only learn a craft but also become more sensitive to design (Post, 1975).

Throughout the stages and steps required for print production, compositional and productive skills may be learned. As the students etch and print, the knowledge of compositional and productive skills will be imprinted in his/her mental and physical processes. There are certain aspects unique to printmaking that is particularly helpful to the development of compositional and productive skills. These aspects include negative and positive visualization, sequential image development in proofing, and space and color separation necessitated by multiple plates. These aspects engender precise organization and exactitude of thinking and behavior to perform the tasks required of the steps and stages from plate-making through the final printed edition (Howard, 2003).

Dewey clarified that for each compositional element, a new printmaking process may be used. With each printmaking experience, the student can be taught aspects of compositional and productive skills utilizing the required stages as a learning process. For instance, the understanding of the color theory and its aesthetic applications can be induced through multiple-plates

printing. Results of hue, intensity, color mixing, and transparency are graphically realized with the pulling of a proof. Through the sequential steps of printmaking, such as plate separation, inking and printing, the compositional theory involving aesthetic judgments correlates and meshes with technical skills (Dewey, 1993). According to Dewey, printmaking processes add an impact to learning due to additional cognitive, psychomotor, and perceptual tasks. For example, when etching is used, the understanding of the compositional theory is reinforced by repetition facilitated by the series of tasks required to prepare and produce the printing surface and printing edition. Because of five major stages in plate and print production: (1) plate preparation, (2) image drawing and rough out, (3) etching image development, (4) proofing and (5) edition printing, the process provides additional time, as well as additional ways of feeling and perceiving the developing image. In comparison to drawing in paper, which is occasionally done in sequential steps (because there is no intermediary product as there is in printmaking) opportunities to develop the image are fewer and less profound (Dewey, 1993).

Learning to Draw Via Printmaking Processes

Printmaking processes facilitate growth in drawing skills and methods. Drawing is learned concurrently to compositional as well as material handling skills. Lithographer Semenoff explained that the demands of the media associated with printmaking processes expand and intensify the learning of drawing, compositional, and media handling skills (Semenoff, 1995).

Since the onset of printmaking on the hand press in the sixteenth century, there was a historic relationship between drawing and printmaking, since artists have used the processes to make reproductions of their sketches. In respect of current art practices, drawing and printmaking can assume a productive and valuable partnership. Developing ideas and skills in one medium can lead to growth in another. Mature artists as well as students can realize the value of alternating, for example, from a dry point in a metal plate to pen and ink drawing on paper (Ross, Romano, & Ross 1990). Semenoff, a lithographic instructor, noted,

> I am in the middle of a project that I thought my students might be interested in. I want to show them that I am working on drawings and prints at the same time; the whole thing was evolving at the same time (1995, p.36).

As printmaking processes are learned, drawing skills can be learned and reinforced through application of drawing methods in image-making on the printing surface. Wyllie elaborated that drawing becomes a more intensive and memorable act than when done on the surface of paper, because of physical exertion caused by the resistance of the material when engraving

lines of varying intensity and expression on the printing surface, and because of the facility to feel these lines in the plate (Wyllie 1997).

The draftsmanship of American impressionist Marry Cassatt was greatly enhanced as a result of an intensive study and practice with printmaking. It was the fellow impressionist and mentor, Edgar Degas, who convinced Cassatt that drawing with a metal on a metal would bring a greater exactitude and commitment to her work. As a result, her senses became sharpened, and she became more capable of more precise representation as this process increased her visual memory (Breskin & Karshan, 1967).

The contemporary artist, David Becker, corroborated the beneficial effect that drawing on copper has. He said, "working on a copper plate is for me an extension of drawing" (Ross, Romano, & Ross 1990, p.36). In addition, Becker believed that drawing on the plate led him to develop an image much further than he would on paper with ordinary drawing tools. The work and development of these artists have been enhanced by three main factors: the tools, materials, and processes themselves. These factors make printmaking an especially effective vehicle for learning and improving drawing skills (Ross, Romano, & Ross 1990).

Conclusion

In art education there are certain aspects about printmaking methods and techniques that advance this art form as superior among the other art media.

Process factors (such as negative / positive visualization and successive states), demand of the media (resistance of materials and surface relief), and opportunities for multisensory perception expand and intensify the learning of drawing and media handling skills. Further, the two-and three-dimensional aspects of print and plate production, the profusion of printmaking, and the proliferation of learning centers advance printmaking as an especially viable process for art instruction.

The interaction of craft and creativity throughout the steps of print production can encourage the development of inner systems and processes as they give rise to the creation of art product. Additionally, due to the opportunities for invention and exploration with materials, art students can build confidence and renew interest in art expression that will lead to creative growth.

Above all, art competencies learned via printmaking processes can promote the development of the aesthetic and creative process concurrent to learning and executing compositional and productive skills. Therefore, it is highly recommended to employ printmaking methods and techniques to teach different art skills to students especially in elementary and junior high school levels.

دور فن الغرافيك والطباعة في التربية الفنية

بسام الردايـده ، قسم الفنون التشكيلية، كلية الفنون الجميلة، جامعة اليرموك

اربد، الأردن.

ملخص

فن الجرافيك والطباعة أحد المناهج الفنية في مجال الفنون الجميلة الذي يعتمد أساساً على تعدد طُرقه وتنوع تقنياته الإبداعية مثل طرق الحفر على المعدن والخشب والطباعة السطحية مثل الليثوغراف والشاشة الحريرية وغيرها من الطرق. يهدف هذا البحث إلى دراسة مدى تأثير تقنيات وطرق فن الجرافيك على تعليم طلبة الفنون، ومدى انعكاساتها التربوية والإبداعية على مهاراتهم وتحصيلهم الفني، كما ركزت على أهمية الجرافيك كوسيط للتعبير في مجال التربية الفنية، ووضحت الفرق بينه وبين غيره من الفنون الأخرى، بالإضافة إلى توضيح دور العاملين الفسيولوجي والنفسي وكيف يتفاعلان ويعملان معاً أثناء القيام بخطوات وطرق تنفيذ التقنيات والطباعة في فنون الجرافيك.

كشفت الدراسةً أن الذين يمارسون فن الجرافيك، يكتسبون مهارات أدائية متميزة، وزيادة في الإحساس والرؤيا والنمو الفكري والتقني لديهم، وبينت أيضاً أن المهارات المكتسبة كان لها دورً فعال وكفاءة عالية في تطوير المفاهيم الجمالية والفكر الإبداعي عند الفنان وذلك بمساعدة نظرية التكوين والمهارات الفاعلة.

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