

# Study on the Development of a Fundamental course for Overcoming Blocks to Creativity in Design Education

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## ABSTRACT

*In the midst of a continued discourse and development concerning design education and its impact on innovation and creativity, I believe that design education still holds the key to enhancing design methodology while increasing creativity by having students take on several creative roles in an interactive and enjoyable studio course. Clearly, there exist impediments that block the creative process in our standard track in design education; however, a course entitled "The Creative Workshop" can overcome such obstacles. Through this course, a student can learn the essential skills of a designer: inventive thinking, a sense of aesthetics, and a spirit of collaboration. In addressing each of the three essential elements, this course has devised role-plays in the way of projects. Simply put, students will be required to demonstrate and, therefore, express their unique creativity that may have otherwise gone muted. Such creative expression can take form in a low stakes, open forum that heralds the invaluable attribute in design such as creative freedom. As a result, the true spirit of creativity is fostered rather than mere aesthetics and styling. Moreover, through role plays, the focus shifts its center from design, allowing each student to explore the uncharted areas of one's own creativity which may come naturally to some extend while disconcerting to others. It may prove particularly uncomfortable for Korean students whose ideas about education have been directly connected to the strict and regimented school system that stresses adherence to standardization such as the national college entrance exam. This course, therefore, is aimed stretch the scope and scale of students' creativity as they learn to collaborate on role plays, utilizing diverse skills from various disciplines*

**Keywords:** Design Education, Fundamental Course, Creativity, Role Playing

## 1. INTRODUCTION

### 1.1 Purpose of Study

The objective of this study is to be able to recommend an educational framework that incorporates creativity as the core focus of design education. Divergent from the existing curriculum of rote memorization of facts and data, the new curriculum should encourage students to tap into their creativity by various experiences. These experiences should work to draw out the creative potential in all students. It is generally understood that Asian students, including Korean students, excel in the area of visual communication but fall short in the area of creative expression. The standardization of all levels of education, including higher education, and culturally specific components have worked to stifle creativity in students. The all-encompassing college entrance exam, for one, has worked to compromise the creativity in students. Given this, developing and fostering creativity must be on the

agenda of our educational goals, no doubt. It is our duty as educators to meet this great demand by providing an educational climate and programs that embrace both creativity and artistic skills.

### 1.2 Current Status of Education

Creativity works in two extreme levels: one, in individuals through various problem solving encounters in daily life and two, in societies through new innovations and cultural products. [1] Professional designers work in an intellectually stimulating environment, developing specialized skills in problem solving, developing ideation, working in collaborative teams, and casting aesthetic visions. Creativity, therefore, remains to be the key virtue in the development of the skills mentioned. Influenced by a Confucian ideology, where apprenticeship training is at its core, even art universities demand students to come readied and trained in the field of art, ultimately either meeting or failing to meet the culturally specific criterion, the entrance exam. This is particularly true in Korea. The so-called training that attempted to boost the spirit of the artisan, specifically acquiring particular artistic skill sets, inadequately

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prepared them to approach problems with creative solutions. In addition, art universities' entrance exams have thus far been influenced by private institutions and their specific strategies. Rather than evaluating a student's potential for creative growth, the entrance exams, though more varied in recent years, continue to evaluate students on how well he or she meets the criteria irrespective of individual potential or creative aptitude. As a result, a mastery of artistic skills is preferred, overlooking what creative potential lies in each student. Moreover, through such an evaluation, students are denied the opportunity to express their creativity, having to be initiated all over again in their major focus of study once they have entered a university and, thereby, essentially discounting the years of training they have undergone in private art institutions.[16]

Generally, art universities provide first and second year students courses in basic design such as design system and expression techniques. For third and fourth year students, design methodology and specific fields in design are offered. Here then, it becomes clear that major-specific courses should be offered in variety and in number.

### 1.3 Phenomenon

The Asian cultural traits combined with the particular influences of art and design departments in higher education paved the way for Asian students to excel in visual articulation over their counterparts in Europe and America. On the other hand, in creative expression and articulation, Asians continue to lag behind. This is particularly true for Korean students who, for the most part, possess excellent technical skills, pre-requisite to the university studies, but fail to acquire a creative aspect. Unfortunately, college curriculum continues to endorse basic skills in artistic techniques, basic knowledge of design programs and tools, and the design process. However, such programs fail to equip students to come up with design ideas and concepts. In short, students continue to have difficulty in coming up with a concept at the earliest stage of the design process. However, a survey of designers and design professors proves that the most important factor required in any design course is conceptualization itself. It is not surprising, then, that a Korean design student, having gone through an art university here, does not transition smoothly into the workplace. There is now a call to action as businesses and corporations complain of the very lack of creative human resources coming out of our universities at present. A survey among design related governmental ministries and businesses shows a great need in changes that need to be made in design education. What is more, 21.7% of the changes must be made in educational programs and courses that promote creativity.

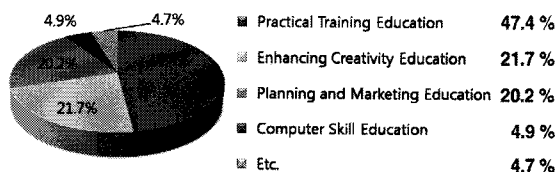


Fig. 1. Crucial Factors for Design Education in Korea [17]

Design strays from fine arts as it alone considers specific functions necessary in the creation of the optimal form, considering production, use, distribution and the environment.[2] This distinction from pure art is culturally specific in Korea as design departments fall under the umbrella of an art college. Also, students who have prepared for the rigorous entrance exam usually prepare in the field of fine arts. Once admitted, students are then introduced to their specific majors and thus enroll in basic courses in their respective majors. Consequently, these major courses, such as industrial design, continue to focus on technique and visual articulation, never straying from fine arts, really. It is the skills of an artisan that are embraced and excessively developed. Sadly, designers who have entered and are now working in their respective design fields agree that there needs to be a transformation and restructuring of design education which includes courses in planning and marketing that underscores the need for creativity. In order to do so, the current design education must undergo a change; a change that ultimately promotes creativity and collaborative effort.

## 2. COURSE DEVELOPMENT

### 2.1 Background

Students from most Asian nations including Korea are well known for their visual communication skills rather than their creativity. Many factors contribute to this generalization. University level education is a cultural priority and with uniform entrance exams, students, particularly in the art and design field, are left to reprioritize or even reconsider their studies in order to gain admission. This sort of system discourages students from expressing their creativity thus leaving fewer choices during the admissions process.

As a result, more attention needs to be brought to developing creativity within the educational system. Craftsmanship has been overly stressed. Rather, a balance between both creativity and craftsmanship will provide a well-rounded fundamental program. Craftsmanship and creativity have a mutually incompatible concept like water and oil, but are also certainly important elements to design education. While the craftsmanship is the potential strength for a designer in light of the process that elicits the results of design, the creativity can be said to be a role of original energy. Thus, these two elements can be said to be very essential to the basic course of design. As I developed a program that sequentially progresses two courses by thoroughly dividing these two elements in the process of developing the basic course in design, those are 3D Workshop and Creative Workshop. As 3D Workshop is the preceding course, it mainly addresses modeling skills through a basic study on form. As the Creative Workshop is its following course, it was developed for the purpose of enhancing creativity in students. Aiming to develop this course in this study, I sought for a natural method primarily for overcoming blocks to creativity while progressing to actual teaching with sophomores.

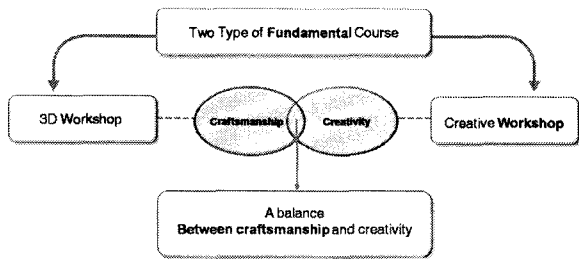


Fig. 2. Providing a well-rounded fundamental programs

The workshop provides a more open and inviting environment. This way, the strictly regimented structure that students are accustomed to will not micromanage their direction as designers. It gives students a chance to enjoy the design process and let out any underlying creativity or potential that may have otherwise lied dormant. The workshop involves a series of roles that students will address. By taking on the role of an inventor, entertainer and ultimately a newly defined designer, students will have a chance to broaden their scope and process. Inventive thinking, aesthetic considerations and collaboration are essential elements to be a designer. Such diverse combinations and cognitive flexibility bring up the likes of Leonardo da Vinci, a man whose boundary between art and design merge and transcend into many different categories. The act of changing ones role excuses students from the restrictions of how they perceive design and gives them an opportunity to openly explore. The workshop is divided into three unique role-playing categories:

- 1) An inventor: As an inventor, each student makes a bug list that he or she has encountered in everyday life. Then select a problem from your list and use small tools to invent a product to solve this problem. Humor must be involved in the problem solving process.
- 2) A designist: As a designist's (designer + artist) , each student takes a product and disassembles all the components. Then choose one favorite artist and make a 3 dimensional collage, like a sculpture, using the artist's visual styling.
- 3) A collaborator: as a collaborator, each student is expected to compete intensively among the teammates. Projects like a human powered bike race made of paper only or a rubber-band-bike race which induces interest and competitiveness at the same time.

## 2.2 Concept of the Course

The basic background to developing this course is play. Role-playing from the perspective of the basic concept mentioned earlier helps the students easily overcome the barrier of innovation as inventors, entertainers, and designers. This concept began in psychotherapy. This process redesigned the technique of psychotherapy in social context and interconnections by newly designing it, and the participants execute it by taking on a specific role which helps to recognize and understand the different perspectives of one another. This is a methodology that has been recommended in order to apply to students who have lost latent creativity as victims of indoctrinating education designed for university entrance.

Craftsmanship and creativity may look different in a Korean design education and an American design education. Our indoctrinating and apprenticeship style education based on Confucian ideology executes the function of mental self examination and thinking. Moreover, it can be said that the free and open style of American education, especially in primary education, has a high possibility of developing individual creativity.

For example, the direction of education that is open to individual direction and manipulation is not offered in Korean education except during core class periods. On the contrary, American education allows for self-motivated educational direction by providing opportunities to play sports and through ample break times. In such an educational setting, young children can express creativity as well as build self-esteem and individual confidence. For Korean students who have been denied such a free environment, creativity and confidence may be attributes difficult to acquire by the time they are ready for higher education. As regards the psychological state called the "fear of creativity," role plays have been proven to decrease this fear. This role play method in education includes three aspects: functionality, aestheticism and collaboration.

Design is a union of art and technique. A designer not only is a pure engineer but also has aspires to understand function. A designer, then, must have an understanding of the basic framework of what he or she should independently design. In this vein, a designer must also be an inventor at heart. In his book, *The British inventor and designer*, David Pye asserts the following: "Invention is a process of finding the principle. However, design is a process of applying the principle." [3] Accordingly, the first role-play project centers around the idea of the inventor, keeping in focus the importance of function. In addition, the second role-play suggests that the role of an artist magnifies the essence of aestheticism; mainly, that all designers are in their core, true artists. World famous designers stand out because they are artists at heart. Pilippe Starck of France and Karim Rashid of the USA. These two designers represent prominent artistic dispositions. Many consider their work pieces of art above all else. And so the second role-play stresses the role of the artist and the creative essence in all works of art.

Lastly, the idea of the collaborator in the third role-play was conceived with the notion that design resembles other disciplines such as team sports. Like baseball and other team sports, a team and its dynamics play a huge role in the success of a ballgame. Likewise, design and the process of design also require collaboration among and between various members of a creative team.

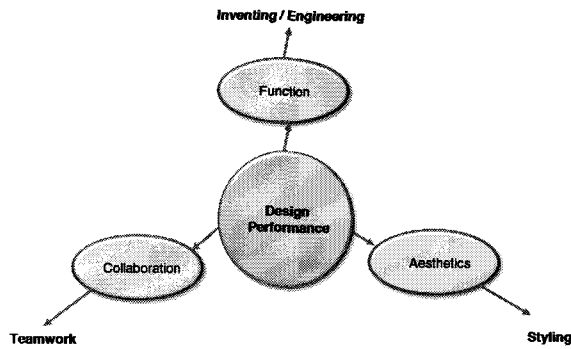


Fig. 3. Schematic Concept of the Course Development

**2.3 Process of Role-playing Projects**

Role-play projects employ a common process that takes an idea from its conception to realization, using a method called the 3V System. The 3V System is based on a theory on design methodology that divides the design process into three stages: Verbalization, Visualization, and Vitalization. In the verbalization stage, an idea is unfolded and verbalized where conceptualization begins to gain meaning. Through dialogue, group discussions and oral presentations, the initial concepts and ideas are materialized into either a verbal articulation. By role-playing the part of an inventor, for instance, ideas of conceived from the list of pests and their possible demise can be verbalized and, thereby, formulated into a workable concept. During the second stage of visualization, the verbally articulated ideas and concepts take on visual form in either 2D or 3D forms of communicating the initial concept. Simply put, the ideas generated during the first stage can now be expressed via sketches or models, fine tuning the concept into a more concrete way. Finally, the vitalization stage goes a step further through a working prototype. Through these three steps, a creative solution to a problem can be convincingly communicated.

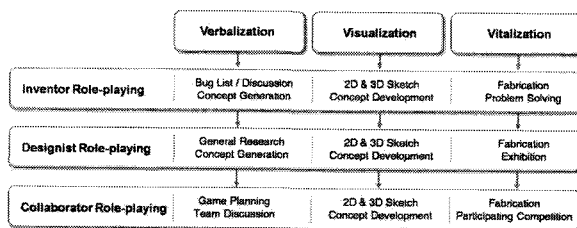


Fig. 4. Process of each projects with 3V system

**3. THREE DISTINCTIVE ROLES AS A DESIGNER**

**3.1 Inventor**

Modern industrial designers have a greater presence in the initial product designing phase than in the past. As a result, the ideation or inventor phase is crucial. As an inventor, students focus on a problem and generate multiple possible solutions. This project is called “Bug Buster”. Everyone, regardless of his or her background, has a bug list .[4] They have something in their lives that they are extremely annoyed with whether on a

daily basis or even just one incident that occurs every so often. After compiling a bug list, students take on the role of an inventor by trying to absolve this personal annoyance. Instead of stressing aesthetics, students are asked to forget about designing and concentrate on creating a unique and manageable invention within 3-4 weeks. As a working prototype, the product must be simple enough to make any necessary changes. This gives students time to bring the project to completion. It develops not only problem solving techniques but also their ability to recognize a problem. An invention as simple as the paper clip may not have been so simple to think of at the time. Not all inventions have to be serious. Humor is definitely encouraged and advantageous in terms of coming up with inventions that may not have otherwise been expected. Also, it helps maintain a relaxed atmosphere to increase further creative directions. Students will gain more confidence through inventing a product that would have otherwise never been fathomed.

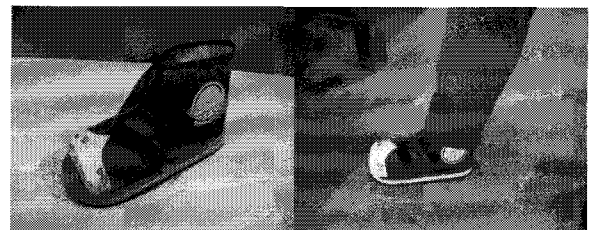


Fig. 5. Fake an injury on an overcrowded subway in order to gain instant pity and a quick access to a seat



Fig. 6. Quick and easy solution to carrying many shopping bags



Fig. 7. Instant Toilet Stool invented by a student from US to overcome cultural difference



Fig. 8. Scooter Helmet attached with extra side mirrors



Fig. 9. Inline Skates installed with cleaning tools



Fig. 10. Multi-paper cup holder



Fig. 11. Instant Exhibition



Fig. 12. Totem design with used television set

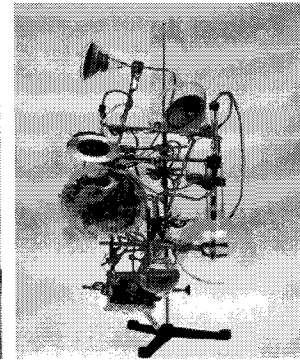


Fig.13. Disassembled and redesigned boom box with the theme of a science experiment

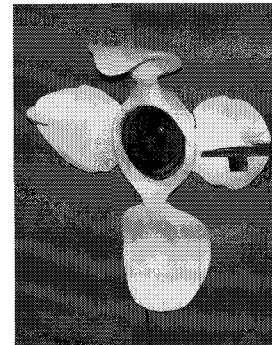


Fig.14. Speaker Design with Luigi Colani's organic style.

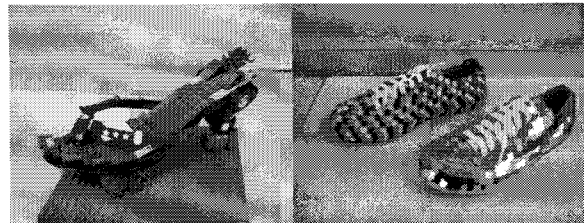


Fig.15. Experimental Collage work with shoes

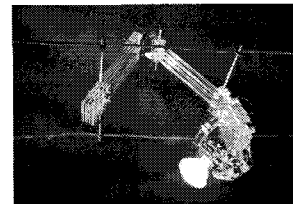


Fig.16. Expression of Self-Portrait with designing low-voltage halogen lighting fixture

### 3.2 Designist

What is the difference between a designer, a craftsman, and a fine artist? Like Philip Stark or Leonardo da Vinci, students are encouraged to broaden their scope and ideas on a project to project basis and determine for themselves where these boundaries lie if not at all. Designers need to invent, entertain but also need artistic sensibilities of both a fine artist and a craftsman. With all these sensibilities intact, I have come up with the term "designist" to capture the various methods in which we create. An example of a designist project is for the professor to choose a product and have each student disassembles its components. A particular theme is assigned as a guideline to how the product is to be reconstructed. The rest is left up to the students. An example of this was with used television sets and a given totem theme as a prerequisite (fig. 13). In another variation, a boom box and a personal experience were the defining factors. Using beakers and other scientific instruments, this student incorporated his prior background into the final reconstruction (fig. 14). In the last example, a speaker was handed out with the option for students to pick their favorite artist. Luigi Colani's organic style and forms were used to formulate the design (fig. 15).

In the end, the product must function like it did in its original state. This gives students exposure to different materials, knowledge about specific mechanisms, and a challenge in terms of improving their artistic level.

### 3.3 Collaborator

As a collaborator, students have the opportunity to work in a team and take on a highly interactive project. This project underwent several phases. It started with the creation of a miniature car and developed into other variations such as aerosol-can driven boats, life size bicycles made from scrap parts and most recently the creation of a human powered paper bicycle. Approximately 8 kilograms in weight made of cardboard, this bicycle can maintain its structure under human

weight. Inspired by physics experiments and technical science projects, this project is meant to induce freedom of styling and a chance for students to embrace a nostalgic time that they may have missed during their rigorous high school education. With several teams involved, the competition can be quite fierce. Depending on complexity, teams are divided into groups of 5-10 students. Functionality issues are once again essential criteria and the outcome of a race determines the most efficient combination of form and function. Students end up improving their team working abilities and show an incredible amount of enthusiasm and eagerness to participate.

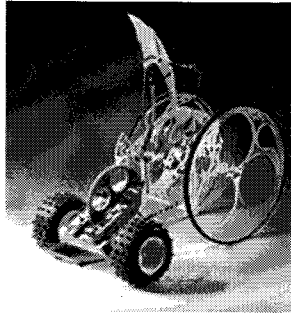


Fig. 17. Multi-paper cup older

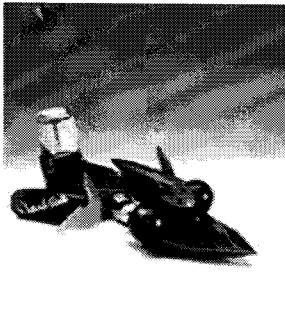


Fig.18. Aerosol can-powered oat

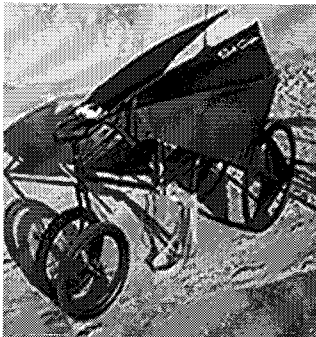


Fig.19. 'Bat Cycle' constructed of Scrap materials and latex with a large rubber band as a power source

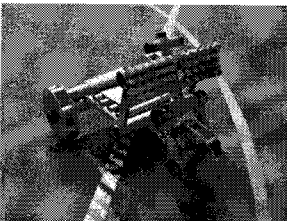


Fig.20. P-Bike : Human powered bike constructed of paper under the limited weight (10Kg) / The Racing and winners

**4. Additional Effort**

A unique project that arises on occasion is a project involved with food. A system of food design can open up new and unexpected ideas that correlate not only to cooking but also to design.

Dumplings, Mandu, or Gyoza depending on what country you are from is international. In this project, just like creating an identity business system for graphic design, students are asked to incorporate design elements and create an eating system all the way from the design of a dumpling to the utensils needed. The first example of this was a collaborative effort with Inter Design (fig. 21). Through this, utensils, and initial experience, the project was introduced into the creative workshop as a possible additional project (fig. 23). The visual appearance and appetizing appeal have a relationship with the designing process.

In Korea, a common term used to describe the visual arrangement of food is Muht. It references not only the food but also the accompanying dishes table setting that make the particular dish both more appetizing and visually striking.

Maht is another Korean term used to describe a pleasurable taste which is correlated with dish function and triggered by muht. With this in mind, both muht and maht are analogous to the design process when considering aesthetic form and function respectively. Both terms are dependent on each other for both a successful and an innovative design.



Fig.21 Korean Dumplings in the shape of the tray

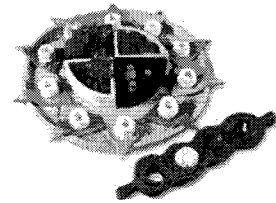


Fig.22 'Volcano Rice' is a type of fusion food combining the sensibilities of Asian ingredients into finger food



Fig.23 Korean Dumplings in the shape of spoon (People may eat those after using.)

**5. CONCLUSIONS**

Creativity in a design course can be achieved through role-play projects as those mentioned in this report. The three types of role-play projects give learning opportunities to design students as students play the three parts: the inventor, the collaborator, and the "designist". More specifically, from product planning to problem solving, the inventor role-play can help students

acquire these practical design skills. When engaged in an entertainer's role, students will be immersed in the areas of event-planning through teamwork and healthy competition. In the designist role-play project, both creative and crafting skills can be trained and polished at the same time.

On the whole, "The Creative Workshop" is designed to elicit learning through experience as students play roles. While engaged in this play-learning activity, students will encounter unexpected overlaps of seemingly unrelated correlations which ultimately influence their design practice and artistic sensibility. Rather than focusing on outer form and aesthetic styling, students will be challenged to broaden their idea of design and its methodology. By role-playing, a designer's own role is expanded to include the roles of an inventor, an entertainer and even a designer/artist, a designist. Ultimately, connections will be forged and new ideas explored. In the end, students will experience growth in their capacity for creative approaches to design, paving a way for innovation.

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