

## Basic design education constructed by introducing psychological quality and relevant evaluation strategies

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**Abstract.** In recent years, both the design theory and design practice have paid extremely high attention on the development of the designers. Many important theoretical achievements have been reached. May, most of the achievements focus on the intelligent system and ignore the research of the dynamic system of designer's creation ability – the research of the psychological quality. This thesis investigated the significance of bringing the psychological quality into the basic education of the designers. Through the analysis of the growth procedure, design practice and creation characteristic language of the famous designers, the thesis discussed the relationship between the development of the designers and the psychological quality and revealed their internal relation, further more proposed the evaluation strategies for developing creative abilities and excellent psychological quality.

### 1. Introduction

#### 1.1 Excellent psychological quality is the dynamic system of the creation activities.

The development experience and design practice of many famous designers proved that the success of the designers has very close relationship with the psychological qualities, such as the personalities. The more integrated the personalities are cultivated and developed, the more the intelligence and wisdom can be played completely. This kind of psychological quality which belongs to nonintellectual scope is decided by the acquired “study”. Most of the students have the same innate intelligence. The study success is largely due to the deference of the nonintellectual psychological quality. Almost all the famous designers had the following excellent personal characters: wide range interests, strong thirst for knowledge and self- motivation, strong mind, be persevered, be brave, high psychological bearing capacity of anti-frustration and be meticulous during their study period. They are full of innovative awareness and passion.

#### 1.2 The development of the design raises higher requirement of the creation ability to the designers.

From 1990s, the design industry entered into an unprecedented period. The design of China not only meets the valuable historical chances but also faces a series challenges. In the development procedure, Chinese designers are not short of the study of the design techniques. Their technical performances are good, no matter on the hand drawing or on the software application. But being short of innovative ideas and creative spirits in the works cannot let the creation activities of the design to have all round and good development. Although there many causes that resulted Chinese design being short of competitive force and innovative abilities at present time, the root reason is that the design education does not integrate in a systematic way of the cultivation and development of the intellectual and non-intellectual psychological quality into the design education system. The non-intellectual factors do not perform their roles in motivating and promoting the design and the creative abilities of the designers.

## **2. The composition elements of the psychological quality of a designer**

### **2.1 Interests are the attraction power for actively exploring into the depth of the things.**

The famous psychologist Jean Piaget thought: “All the fruitful work shall result from the interests”<sup>[1]</sup>. As the internal motivation of an action, the functions of the interests are multifaceted. Interests have initiating and orientating functions to the activities. The designers’ innovative activities are usually initiated by the interests. The outstanding function of the stable interests in the creative activities the dynamic effects. It can provide tremendous power to the designers and makes them to work day and night to explore and to work. They paid great energy and long time in the work, but they experienced happiness in the work and did not get tired.

The famous couple designers Mr. and Ms Imus used a home-made molding machine to make the furniture model. They tried to find the best design for the chairs and desktops by using one step shaping plywood. They repeated the experiment many times. The process was dangerous. The poor equipment made the heating container to explode. It almost killed the couples. This well known furniture, which was called DCM later, provides comfortable support for the customers, is introduced the low cost materials a beautiful appearance and has a refreshing, simple and natural style. It obtained great success. Until now, the furnitures of this kind of design are still produced and become the classic design of 20 century furniture. They have very broad view in their innovative activities. They engaged in the exhibition, film and multimedia design and creation. The most famous multimedia presentation was playing “American Snapshot” in Moscow in 1959. The couple designed seven screens and played 2200 pictures simultaneously in quick speed, accompanied with the sound and pouring the fresh air into the hall by ventilation. The film showed all aspects of American life to the Soviet Union at the time of cold war. Just as what Mr. Peter Black described: “Almost all the people were moved to tears when they came out of the hall.” Mr. Kevin Roche has described Mr. and Ms. Imus, “They integrated various roles in their work and were highly competent in wide range industries. They could construct unbelievable connection among these industries.”<sup>[2]</sup>At present time, various programs are intercrossed and penetrate each other. The interdisciplinary and intercross programs emerge endlessly. Only concentrating on the interests and knowledge of one program can not adapt the present requirement of science development. The experience of Mr. and Ms. Imus fully illustrates this phenomenon.

### **2.2 Motivation is the internal starting force for the design activities.**

Motivation is a kind of internal starting force stimulated from the depth of the creative subjects – the designers for realizing their goals and dreams. Motivation is the direct power of encouraging the designers to take the action. The rightness and the strength of the motivation will affect directly the results of the creation activities. Architect Tadao Ando loves traveling alone from his childhood. He often desires to find “The things unknown or even unable to image by other people”. In the beginning period of his studying abroad, he found a book of Le Corbusier. He spent several weeks to save money in order to buy this book. “In my heart, there is a strong desire. It is to know how Mr. Corbusier can concept out these things”<sup>[3]</sup>. So, in a short time, the book became black by turning the pages. It developed his strong preference to the geometrical forms and “pure space” constructed by the forms in his later architectural design.

### **2.3 Strong mind is the insistence force for accomplishing the tasks.**

The psychological period during which the designers consciously organize their behaviors to reach the design goal and connect this consciousness with the difficulties will become the willing period. Willing is the direct reason of executing the operation. It is guided by the goals and promoted by the motivation. In recent years, some psychological researches indicate that the person’s willing action can be formed through conditional study. If the environmental conditions are controlled very well, the strong willing can be cultivated in the creative subjects.

### 3. The goals of the basic design education in which psychological structures are introduced

Undergraduate education is a whole system. The first year of the education is the base of the system. It has very important effects like seeds' breeding and planting. Emphasis on the cultivation of the quality of the students, the creative abilities and personalities has been promoted from the Bauhaus era. This has been the consensus of modern art and design educators. The goals of the basic design education in which psychological quality is introduced in not only strengthen the practical application of the learned but also emphasize on the practice and experience of the student in their study, and make the cultivation of the students' creative abilities and non intellectual psychological quality run through the whole education procedure.

The goals can be described from the dimension of the intellectual targets and non intellectual psychological quality targets. The concrete goals of exploring education model, of which the designers' education in the enlightening period is based on the non-intellectual psychological quality are as followings in table 1:

Table 1. The goals of basic design education in which the psychological quality structure is introduced.

The goals of basic design education in which the psychological quality structure is introduced	
Intellectual goals	① Gradually promoting the students' thinking quality, shaping open, multi-dimensioned thinking ways;
	② Cultivate the students' abilities on analysis, thinking, determining and information communicating, for example: the skills of finding the resources of a subject, selecting the classic model works and identifying the representativeness of the reference works and the skills of written and oral descriptions. Based on these skills, the students can form and develop the self-studying abilities;
	③ Strengthen the students' visual thinking abilities so that enhancing the analyzing, integrating and evaluating skills by these abilities;
	④ Promote to pay attention to the abilities application, and apply synthetically skills in the methodologies of the learned knowledge systems, such as the theories, methodologies, innovation, performance, techniques etc. Based on that, form and develop the abilities of solving the problems in the program subject homework, in the practice and making the creation.
Goals of psychological quality	① Let the students have wide range interests and broad field of view, improve continuously the knowledge link cognitions and structural abilities among various programs and subjects;
	② Make the student to experience the difficulties in the design and happiness when the abilities are developed;
	③ Through various training methods to cultivate the students the interest and passion to the design science and positive attitudes of study;
	④ Develop comprehensive psychological intelligence of the students, make effort to develop the students' abilities of observation, imagination, thinking, determination in order to form personal interesting taste and preference;
	⑤ Cultivate the correct sense of worth, meanwhile understand to respect culture and art with different sense of worth and cultural background, develop an open mind and a state of willing to absorb all the excellent cultural achievement in the world;
	⑥ In the practice of the classes, especially through some extend of repeated subject exercises, cultivate the ambitious, diligent, persevering, hard working, modest and prudent personal psychological qualities;
	⑦ The students are able to promote creative evaluation opinions to the subjects, model works, teachers' tutoring and homework of the classmates.

### 4. Evaluation strategies

The procedure of the basic design education is not the base the transformation or cultivation of pure techniques. It should assume the missions, which is supported by the study evaluations, of laying the foundation of the study, stimulating the desire of study, encouraging the students to learn through all their life. Especially for the new students, the depression and anxiety in the study will be a painful spiritual journey for them in the course of their study. It will be inevitable effect their psychological health, and will not only result inefficiency in their study but also will form psychological obstacles in their future study.

Almost all the new students have the ambitious natures and will to display themselves. All of them wish to be recognized and be appreciated. If these natures are protected and stimulated well, they will be transferred to the confidence and the motivation of study, so, the students will involve into the study with a balanced state of mind. Conversely, if the students are subject to too much

excoriation and frustrated criticism after failure, they will lose the interests and courage. They will even worry to be failed again and close and isolate themselves in the doubt and uncertainty states. Finally they lose the balance in their mind. Their study life will be an experience of depression and uncertainty. The key point for solving this problem is the good evaluation.

Table 2. Study result evaluation table for Psychological quality structure introduced basic design education

Main evaluation indexes	The specific content	Itemized appraisal			
Basic information	① Good learning interest and behavior in design; ②Good at collecting effective information in the teaching process and further learning ability; ③Basic ability to improve, non - intellectual quality of healthy development	score			level
		Total score 15			
		A	B	C	
		15-10	9-5	4-1	
Subjectivity	①It can actively participate in the process; ②Be able to make meaningful choices of professional content, be good at independent thinking, and be able to solve design problems in a variety of ways; ③Dare to break through the routine, pursuit of transcendence, and actively show their own personality	score			
		Total score 15			
		A	B	C	
		15-10	9-5	4-1	
Openness	①Have a relaxed learning mentality and expressive desire; ②To give teachers and students their own design insights to show their long history; ③Interests, hobbies and needs to be met but fire, personality is well developed	score			
		Total score 20			
		A	B	C	
		20-15	14-10	9-1	
Self-construction	①Have a strong curiosity and desire to explore, can be fully devoted to the design and learning process; ②Good at cooperation and communication, good at self-regulation, flexible and diverse learning methods and exploration methods; ③Strong sense of independence, can mobilize their own life experience and personalized view of their learning	score			
		Total score 15			
		A	B	C	
		20-15	14-10	9-1	

## References

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