



## VOCATIONAL SCHOOLS IN THE FIELD OF INTERIOR DESIGN CREATIVITY OF STUDENTS

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### ABSTRACT

This study focuses on the undergraduate students from interior design (including spatial design) field of technological and vocational education to explore the important factors affecting their creativity and to develop the creativity assessment instrument. This study is based essentially the system proposed by Csikszentmihalyi holistic view of creativity, integration of personal, social and cultural factors of the three systems of creativity as a research framework, in-depth interviews were held with award-winning students of the 2010 National Interior Design Competition. Contents from the interviews were later analyzed via Content Analysis to sort out their creativity process as creativity indicators for future references to interior design creativity scale system. This kind of professional practice research-oriented study of creativity, not only highlights the characteristics of vocational education, the results also can be used as creative educational policy development and implementation of creative teaching school reference.

**KEYWORDS:** Creativity Process, Indicator, Systematical Creativity, Creativity Scale, Interior Design

### INTRODUCTION

#### Preface

Creativity is the key competition factor for design expertise such as interior design, not to mention that every nation strives for creative design industry as its profitable competition nowadays. Putting creative industry in the national development key project list, Taiwan obviously emphasized creativity as its national competence base. Training from vocational schools matters a lot when it comes to professional competence which results from the schools' devotion and dedication to vocational education. In other word, Technological and vocational schools are the nation's educational facilities to nurture top-end technical personnel and creativity cultivation is the key among all. Therefore, how to inspire, develop and enhance students' creativity is particularly important for the interior design field. If students' outstanding creativity process can be analyzed and sorted out as systematic creativity indicators, a reliable and valid scale would be set up as well, which can be used as references for creative curriculum design and implementation that might inspire more students' potentials in design.

### RELATED REFERENCES

#### Basic Concepts of Creativity

Creativity is referred as the mental process that people try to solve problems in novel and unique way and create a new and social value. Creativity exists in process of problem solving. As a result of differences among creation levels, problem solving can be divided into conventional problem solution and creative problem solution. The creative

problem solution means to apply new plans or procedures to create the new product that has social value, such as a writer creates a new novel, an engineer designs a new machine, or a scientist proposes a new law and so on. In creative problem solution, people apply the existing knowledge and experience nimbly, recombine knowledge according to problem scene then create a new product that has social value. Because creativity always exists in the problem solution process, therefore, some people believe that the creativity is a question solution domain. (Matlin, 1989)

### **Contents of Creativity Assessment**

It was not until 1950, creativity assessment was known to the public by J.P. Guilford's speech "Creativity" at the American Psychology Association. Formal tests were gradually introduced to the public. Over 200 tests and assessments regarding creativity or related characteristics, manners and tendencies were invented in psychology field within 20 to 30 years. One of the most used tests- Torrance Tests of Creative Thinking (TTCT) was the most essential assessment tool during 1960's to 1980's which has brought out more than 1000 related researches. (Lin, 1995)

Creativity itself is a complex compound of individual's abilities, mostly stress on creativity assessment regarding cognition focused on divergent thinking. As a matter of fact, in the overall construction of creativity includes divergent thinking and convergent thinking (Dong, 1995). In addition to cognition factors, non-cognition factors, individual previous experiences and environmental stimulus factors are also important ingredients that affect creativity performance. (Chen, 1991) Analysis of general creativity includes cognition aspect, such as smoothness, expedient, originality and accuracy; cordiality aspect contains risk, challenge, curiosity and imagination. These connotations became present indicators used for creative thinking assessment.

### **Assessment of Creativity**

According to Csikszentmihalyi, factors affect creativity include, "the domain", "educational major" and "individual", these three factors interact and result in creativity. Csikszentmihalyi believed that whether a person possesses the ability to create relies not entirely on personal characteristics, partly depends on its created innovation is acceptable for gatekeeper of that domain. A person does not have a domain unique creativity until a person is trained or educated by that domain. The creativity can only be shown in the present educational major. In other words, one's professional creativity will not be unfolded unless one is educated and trained in professional area. Gardner (1993) also pointed out that capacity of creative responses with wide and lasting influence must be connected with certain domain, regarding various skills, knowledge and professional training period. As for interior design, creativity certainly has some common "general" elements like other fields, but, "individual creativity" is a must among all. If students want to nurture creative responses with wide and lasting influences, they must go through an essential professional training period to cultivate the skills and knowledge required by each profession. Therefore, to measure students' professional "creativity" (includes creativeness level of one's work) one must fully understand skills and knowledge of this major.

## **STEPS OF RESEARCH**

### **Research Method**

The important meaning of this research is adopted viewpoints from Csikszentmihalyi's "system creativity" (1988, 1996) to discuss overall possibilities affect creativity systematically. As for research execution, rigorous steps and

approaches were adopted to firstly analyze interviews with national interior design competition award-winning students to sort out their creativity process. Factors of interior design creativity indicator were extracted from analyses of questionnaires and rich attributes of interior design works.

Content Analysis was used mainly in this research, also called “Literature Analysis” or “Information Analysis,” research method that researchers are not involved in projects. Content Analysis technique is mainly aims at the document content to make the effective deduction group of procedures; these deductions are concerns of news receivers and conveyors, or news content itself. However, deduction approaches vary from theories or research preferences by different researchers. (Weber, 1989) When it comes to analysis method, the content analytic method must carry on with several stages. According to characteristics of general researches, one must define clearly the research questions or research subjects, along with research design fits the subjects, so that data collection and analysis can be proceeded; Content Analysis procedures as well. (Wang, 2003)

### **Research Limitations**

When it comes to research limitations, this research only firstly proceeded interviews with award-winning students from the 2010 National Interior Design Competition; later, interviews were analyzed via Content Analysis to sort out their creativity process as influences to creativity indicators for future references to interior design creativity scale system.

### **SETTING UP THE INTERVIEW QUESTIONNAIRES**

In accordance with related researches regarding creativity and viewpoints from Csikszentihalyi, factors affect creativity include, “the domain”, “educational major” and “individual”, a draft of questionnaire was outlined. The author invited four scholars devoted themselves in creativity, three teachers that teach design in university and two judges from the 2010 National Interior Design Competition to review the questionnaire draft. After two expert meetings, the questionnaire was altered and revised eight items with its content as follows:

- Reasons for you to join in this competition (motives, presentations)
- Let's talk about your work
  - What is your design concept? (motive, observation, combination, imagination, instinct, expertise applying, question making)
  - What problems and who's problem do you wish you solve to create this work? (question making, knowledge, analysis capacity)
  - What reasons make you wish to work on this project? (motive, personality characteristics )
  - What works you use as references before completion of this work? (knowledge, expertise gaining, method searching, approaches)
  - What other ideas were not adopted eventually and why before completing this project? (knowledge, expertise applying, method searching, approaches, assessment verification, the most appropriate

approach)

- What are the specialties of your project comparing with others? (feasibility, serviceability, guiding standard, expertise applying)
- What do you think judges like the most about this project for its winning? (guiding standard, culture, creativity objective assessment, creativity objective assessment)
- What other aspects can apply the same principle as your project? (feasibility, serviceability)
- What other functions or improvements can be added if you have more time, money and other resources? (expertise applying, working environment, application, forming of knowledge)
- Let's talk about things that impressed you during your creation.
  - How did you come up with a team? (school curriculum, member of the clubs)
  - What are the things that you remember during your creation? (creation process, working environment)
  - What and how do you see your partner? (member of the club, feasible team, imaginary team, club participation)
  - Who do you consider as a team leader in your team? How does he or she lead you? (member of the club, feasible team, imaginary team, club participation, personality characteristics, mentality, communication)
  - Was there any argument during the creation? Give an example of how you dealt with it. (member of the club, feasible team, imaginary team, club participation, communication)
  - Who were there to support and encourage you during the creation? (working environment, family environment, family education, family support, school environment, sponsor, professional personnel)
  - Did anyone ever give you a cold shoulder and how you manage it during the creation? (working environment, family environment, family education, family support, school environment, sponsor, professional personnel)
  - What was the biggest challenge you encountered during the creation and how you overcame it? (creation process, mentality, member of the club)
  - What was the happiest thing ever during the creation? (mentality, motive, personality characteristics)
  - What was the most distasteful/ painful thing during the creation? (mentality, motive, personality characteristics)
  - How long was a working session for you? (attentiveness, personality characteristics)
  - Where did you usually work? (working environment, facilities)

- What improvements of your working environment would you wish if possible? (working environment, facilities)
- Now let's talk about your instructor.
  - What role did your instructor play during the creation? (sponsor, professional personnel, curriculum teaching, school environment)
  - Why would you admire your instructor? (sponsor, professional personnel, curriculum teaching, school environment)
  - What were the biggest influences your instructor had on you? (sponsor, professional personnel, curriculum teaching, school environment)
- Tell us about yourself now (regarding your personality and way of thinking, etc.)
  - How would others think about you? (personality characteristics)
  - Do you agree with others' descriptions about you? If not, why? (personality characteristics, mentality)
  - What do you see yourself? (personality characteristics, mentality)
  - Tell us about your high school years.
  - Tell us about your college life.
- Tell us about your family.
  - Please give a brief introduction about your parents. (family environment, family education, family support, guiding standard)
  - How do your parents teach you? (authority, democracy, laissez faire) what influence does the family education have on you? (family environment, family education, family support, personality characteristics)
  - What did your parents tell you or talk about the most during the creation? (family education, family support)
  - What do your parents think about your winning? (family education, family support)
  - Do you have any siblings? How are you guys getting along? (family support)
  - What is the biggest influence from your siblings? (family support, personality characteristics)
- What is your plan for the future? (mentality, personality characteristics)
- Is there any thought you would like to share with the participants next year? (mentality, personality characteristics, guiding standard)

## CONCLUSIONS AND SUGGESTIONS

### Conclusions

Participants of the interviews were winners from the 2010 Apexlife National Interior Design Competition, which has been held for three consecutive years. There are 502 pieces of works from more than 700 students from 18 schools (including 4 vocational senior high schools) joined in the 3<sup>rd</sup> competition in 2010. The primary competition was held on November 28<sup>th</sup> in National Taiwan Normal University, while the final competition was held on December 18 in Taipei International Convention Center. 20 students were selected from the 25 finalists with 15 pieces of works for preliminary interviews. Their data and contact information were recorded with their permissions. According to the interviews and eight items in questionnaires, creativity indicators were sorted out as follows respectively:

- Vision, learning, expression and experience.
  - Observation and historic data search of related subjects and agenda inspiration.
  - Agenda, site circulation and concept incorporated in design.
  - Summarize one's own viewpoints as design topic.
  - Surfing on the internet and searching for architects' information.
  - Imaginary pictures result from works.
  - Color of layout and design emphasizes on visional changes.
  - Homogeneous works.
  - Main sculpting and theme designing.
  - 3D model making and environmental friendly materials using.
- Different backgrounds with different expertise.
  - Brainstorming with more ideas and better understanding with each other's work efficiency.
  - Complementary status.
  - Leadership relation and mutual discussions.
  - Ideas exchanging and comprising solution.
  - Supportive attitudes.
  - Feasibility.
  - Resources and facilities.
  - Sense of achievement, sense of satisfaction.
  - Capacity of managing software.
  - Staying up.

- Studios and home.
- A complete computer graphics facilities and offering related supports.
- Guidance, an inspiring guidance.
  - Guidance from instructors.
  - Experiences, supports and encouragements from instructors, students' self-confidence.
- Responsibilities, attitudes, self-independence training, observation, limited resources, experiences, positive attitudes, enjoyable courses and information.
  - Error and try, laissez faire style of attitudes.
  - Continuous learning, no limitation, cross-style.
  - Enthusiasm, resolution, deliberation.

### Suggestions

Followings are suggestions from the research.

- Further in-depth interview should be carried on with award-winning students, as well as their instructors, so that their creation process can be used for references on drafting creativity indicators.
- Other data analyses can be used and interview participants should be increased to build up reliability and credibility of research.

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