PROFESSIONAL COMPETENCY OF STUDENTS IN DISPLAY DESIGN
MAJOR OF COLLEGES AND UNIVERSITIES UNDER GUANGDONG PROVINCE

Chen Yanyan

Kamolmal Chaisirithanya

Chuanchom Chinatangkul

Leadership in Educational Administration,

Faculty of Education, Bangkokthonburi University

E-mail: 6363200008@bkkthon.ac.th

ABSTRACT

The objectives of this research were: (1) to explore the components of professional competency of students in display design major of colleges and universities under Guangdong Province; and (2) to propose the managerial guidelines for professional competency of students in display design major of colleges and universities under Guangdong Province.

The research methodology was mixed methodology, including qualitative research and quantitative research. The population includes managers and lecturers of display design majors in universities affiliated to Guangdong Province, total 1896. The adequate sample size were determined by the table (1970) of Krejcie and Morgan, totaling 337. The key informants were as follows: four entrepreneurs were managers with more than eight years of relevant work experience related to the display design industry, including company founders, general managers, executives and senior managers of design companies; four lecturers were teaching display design for more than five years and have trained more than two graduating students in the profession; four students were required to be within three years of graduation and working in a job related to the display design major, obtained by purposive sampling method. The instruments used for data collection were semi-structured interview form, five-point rating scale questionnaire, and Focus Group Discussion form. The statistics used for data analysis were descriptive statistics and Exploratory Factor Analysis as well as content analysis was employed.

The research findings revealed that: (1)there were five components on Professional Competency which consisted of Aesthetic, creative and decision-making skills, software operation and construction knowledge, operational and practical skills, art and design basics, corporate training skills; and (2) there were total 19 managerial guidelines on Professional Competency in colleges and universities under Guangdong Province which consisted of four managerial guidelines for component of aesthetic, creative and decision-making skills, five managerial guidelines for software operation and construction knowledge, three managerial guidelines for operational and practical skills, three managerial guidelines for art and design basics, and four managerial guidelines for corporate training skills.

Keywords: Professional Competency, Display Design Major, Guangdong Province

1. Introduction

In recent years, Guangdong's total economy has been continuously adjusted and upgraded. Accordingly, there will be a series of economic explosion points, showing a considerable multi-point flowering situation and the demand for talents in various industries will gradually increase, becoming the key field of world economic development in the post pandemic era. With the arrival of various international and domestic displays, the demand for a series of professional display design talents was also growing steadily.

A series of press conferences on the 14th five-year plan of Guangdong Province was held on April 25, 2021. At the meeting, the provincial development and Reform Commission, Department of Education, Department of Science and technology and other departments highlighted the "14th five-year plan for National Economic and Social Development in Guangdong Province and 2035 outline of vision goals" (2021). During the period of the 14th five-year plan, Guangdong Province should give full play to the driving role of innovation for high-quality development, and at the same time contribute to strengthening the national strategic scientific and technological force. Frequent cultural exchanges and cooperation require many display design professionals who were proficient in design, master display knowledge, be good at communication and understand cross-cultural knowledge, also put forward the higher request to the professional competency, the method competence, and the social competence of the laborer. The educational circles should take active action, seize the opportunity of Guangdong Province's development, keep pace with the times and the market, and actively seek ways and

strategies to solve the problem of developing the professional competency of the students in display design major. Researcher had committed to improving the professional competency of students and training comprehensive application design talents to serve the development of Guangdong Province.

The curriculum system of display design in China's colleges and universities: an important means to cultivate display design professionals, and there were also a fundamental way to promote the sustainable development of display design in China. In order to cultivate academic talents in display design, cross-compound people's congresses and employment and entrepreneurship talents, it was very important to set up the curriculum, the arrangement of course content, and the rationality and scientific of the course structure of the display design major in colleges and universities in Guangdong Province.

The researcher wants to examine the answers as follows; What was the professional competency of display design? Through combing the relevant literature at home and abroad, this paper analyzes the concept, connotation, composition, and training methods of professional competency, and defines the related concepts. Under the construction background of Guangdong Province, what were the requirements for the professional competency of the students in display design major? This paper analyzes the employment situation and demand of the students in display design major under the construction background of Guangdong Province and determines the necessity of this research. What was the current situation of developing the professional competency of the students in display design major? Based on a survey of several colleges and universities under Guangdong Province, data collected and analyzed through surveys of graduates, teachers and students. Display design was essentially a kind of information dissemination design. Display design was different from architecture and interior design, which aim to satisfy the function of used, the space used as a container of information. Presentation Majors were different from Visual communication majors that focus on visual information. Presentation major was not a digital media and interaction major based on digital science and artificial intelligence. (2023)

In conclusion, to create a favorable environment and conditions, cultivate and aggregate various types of display design major talents, especially outstanding and top-notch display design major talents, fully mobilize the enthusiasm and creativity of the vast number of scientific and technological personnel. This research conduct an exploratory

and malleable study of the overview of the display design profession, as well as the training methods of Talent in Design major and the Skill training methods of display design major, the training policy suitable for the ability development of students of display design in Guangdong Province was formulated, and submitted to experts for verification, so that the establishment of guidelines pointed out the direction for the development of display design professional work in Guangdong Province, so that various teaching work has rules to follow. How to make the work gradually develop and become more prosperous under the guidelines has fundamentally laid the foundation for the teaching of display design and ensured the smooth work of the display design profession.

2. Research Questions

This research sought to answer the following research questions: (1) What are the components of professional competency of students in Display Design major of colleges and universities under Guangdong Province?

(2) What are the managerial guidelines for professional competency of students in Display Design major of colleges and universities under Guangdong Province?

3. Research Objectives

(1) To explore the components of professional competency of students in display design major of colleges and universities under Guangdong Province.

(2) To propose the managerial guidelines for professional competency of students in display design major of colleges and universities under Guangdong Province.

4. Research Method

(1) Research Design

The research methodology was mixed methodology, including qualitative research and quantitative research. The quantitative data was collected through a survey questionnaire distributed to administrator instructors and graduates (graduated within 3 years) in Display Design Major of colleges and universities under Guangdong Province. Descriptive statistics was used to classify and recognize the basic properties of samples. In addition, percentages and Standard Deviations was used for data analysis. Content analysis techniques will be employed to analyze the qualitative data. The findings from data

analyses was integrated to develop the managerial guidelines for managerial guidelines for students of display design in colleges and universities under Guangdong Province.

(2) Population and Sample

Population consisted of 1896 who worked as display design teachers, administrators, and graduated in the display design major of universities. The researcher determined the sample size with Krejcie and Morgan's Table (1970). The sample was teachers, administrators and graduated, a total of 337 people, using stratified sampling techniques.

(3) Research Instruments

Step (1) Qualitative research: semi-structured interview form.

Step (2) Quantitative research: five-point rating scale questionnaire.

Step (3) Qualitative research: summarized the guidelines by researcher.

Step (4) Qualitative research: focus Group Discussion form.

(4) Data Collection

The steps for data collection will be as follow: Request permission to collect data for research from Bangkokthonburi University to 12 colleges and universities in Guangdong Province, then carry out data collection with the selected samples by sending questionnaires to the coordinator teachers who will help for collecting data with the selected samples in each school/college/department.

(5) Data Analysis

The data for this research of demographic variables were analyzed by descriptive statistics, frequency, and percentage. The variables of professional competency of students in display design major were analyzed by descriptive statistics; mean, Standard Deviation (S.D.). Exploratory Factor Analysis (EFA) was used. The components of professional competency were analyzed to reduce irrelevant variables.

5. Research Results

There were five components on Professional Competency which consisted of aesthetic, creative and decision-making skills, software operation and construction knowledge, operational and practical skills, art and design basics, corporate training skills.
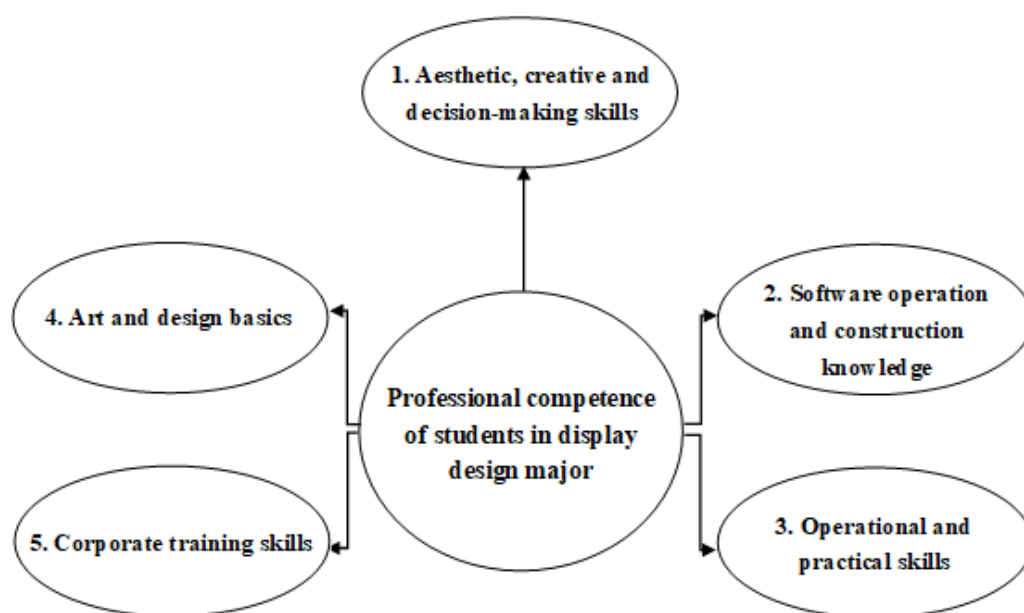
Figure 1 Shows the Components of Professional competency of Students in Display Design Major of Colleges and Universities under Guangdong Province

Table1 Shows Eigenvalues, Percentage of Variance, Percentage of Cumulative Variance of the professional competency of display design major

	Total Variance Explained								
Com ponent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Varianc e	Cumulative %	Total	% of Variance	Cumulative %
1	55.019	71.454	71.454	55.019	71.454	71.454	16.286	21.151	21.151
2	2.211	2.872	74.326	2.211	2.872	74.326	16.182	21.015	42.166
3	1.589	2.064	76.389	1.589	2.064	76.389	10.894	14.148	56.314
4	1.239	1.609	77.998	1.239	1.609	77.998	9.627	12.502	68.816

5	1.013	1.316	79.314	1.013	1.316	79.314	8.083	10.498	79.314
Extraction Method: Principal Component Analysis.									

From Figure 1 and Table 1 shows the number of components of professional competency of display design major. It was found that there were 5 components with an Eigenvalues greater than 1. When rotating the axis, it explained a total variance of 79.314 percent, but considering the selection criteria, components with factor loading at 0.4. There were more than 1 Eigenvalues and more than 3 or more variables that described components.

The components that met all 5 criterias when the axis was rotated, component 1 had a maximum Eigenvalues of 71.454, it can explain the total variance of 21.151 per component, component 2 had a maximum Eigenvalues of 2.872, it can explain the total variance of 20.015 per component, component 3 had a maximum Eigenvalues of 2.064, the total variance can be explained by 14.148 percent, component 4 had a maximum Eigenvalues of 1.609, it can explain the total variance of 12.502 percent, component 5 had a maximum Eigenvalues of 1.316, explaining the total variance of 10.498 percent, and other components had an Eigenvalue and the ability to describe it, all variance gradually decreased accordingly, and the components that met certain criteria were components 1-5, it was found to be able to explain a total variance of 79.314.

It explained that the components of Professional competency of Students in Display Design Major of Colleges and Universities under Guangdong Province consisted of five components:

Component I   "Aesthetic, Creative and decision-Making Skills";

Component II   "Software Operation and Construction Knowledge";

Component III "Operational and Practical Skills";

Component IV   "Art and Design Basics";

Component V   "Corporate Training Skills".

There were total 19 managerial guidelines on Professional Competency in colleges and universities under Guangdong Province which consisted of four managerial guidelines for component of aesthetic, creative and decision-making skills, five managerial guidelines for software operation and construction knowledge, three managerial guidelines for

operational and practical skills, three managerial guidelines for art and design basics, and four managerial guidelines for corporate training skills.

6. Discussion

The discussion will be presented as follows:

6.1 Discussion about major findings of objective 1

The first objective of the study was to explore the components of professional competency of students in display design major of colleges and universities under Guangdong Province. The major findings revealed five components of informational leadership: aesthetic, creative and decision-making skills, software operation and construction knowledge, operational and practical skills, art and design basics, and corporate training skills. These components in the research findings were important in building the management of the display design program and were an important means of improving the display design program. The joint development of the five components can bring more opportunities for the future of the display design major. Guangdong Province, as a gathering place of knowledge-based talents, it was especially important to improve the quality of talent training. At the same time, it also puts forward higher requirements for display design majors to cultivate innovative and practical talents as the main goal. To improve the level of display design major, it was necessary to establish a perfect display design professional management system and improve display design major. From the results of the study, the five links of display design professional management were the main components of building of the display design major. It can also be broadly understood as: in a good environment and academic atmosphere, with a sound management system, efficient and professional organizational departments, innovative talent cultivation models and methods, continuously improving students' professional abilities and learning abilities, building a high-quality talent team for display design, cultivating a group of innovative and versatile talents, and promoting economic development and social progress.

These findings were consistent with previous studies conducted by Wang Taopeng (2012:167) Aesthetic development in art and design Research findings that Cultivation of Aesthetic Competence of Art and Design Majors from the School of Advertising. Guangzhou Academy of Fine Art （GAFA） ' s Art and Technology major also emphasize the deeply explore the innovative cross-fertilization of art and science, technology, economy and

culture, innovate the mode of schooling with the concept of interdisciplinary system integration of art and science, and cultivate composite design talents with international vision in the new era. (2023) However, it was important to clearly pointed out that China's exhibition industry has become an important platform for building a modern market system and an open economic system. The future demand for exhibition and display design talents was a golden period of leapfrog development. From the State Council issued "Several Opinions of the State Council on Further Promoting the Reform and Development of the Exhibition Industry" (2015) In 2021 Farkhadovna Khamrayeva Aziza's paper "Didactic basis for the professional competency of university students "deals with the realization of the problem of pedagogical basis for the professional competency of university students. From the pedagogical point of view, it was considered the concept of professional competency. This article confirms the view that professional competency was the creation of new values of quality important in the process of personal development, as the independent acquisition of new subjective knowledge, skills and methods of research activities in the process of university studies. (2021)

6.2 Discussion about major findings of objective 2

The second objective of the study was to propose the guidelines for developing the professional competency of students in display design major of colleges and universities under Guangdong Province. This validation result was slightly different from the components of objective 1. The guidance proposes a more comprehensive and practical method for achieving display design professional enhancement. The construction of this policy can serve the development of display design education management in an all-round and multi-angle way, provide certain theoretical and practical basis for better display design professional education, and provide corresponding reference and reference for relevant departments to formulate corresponding policies.

Professional Competency of Students in Display Design Major of Colleges and Universities under Guangdong Province, there were total 19 managerial guidelines: Consisted of (1) Establish a practical training system for aesthetics and creativity in the curriculum system;(2) Improve students' programmer communication skills;(3) Enhancing students' ability to perform;(4) Construction of an innovation system;(5) Enhancing students' practical application ability in software operation;(6) The core competencies of hand-drawing and expression, and deducing solutions;(7) The system of the applied system course of display design and the feedback mechanism of the program practice;(8) Lighting

and materials environmental protection and construction of knowledge platform construction;(9) Ergonomics course training system;(10)   Establish a training system for designing cost-budgeting courses;(11) the training system of the ability of writing and exhibition planning management;(12) the training system of project estimation and enhancing the ability of industry ;(13) Three major compositions as a basic course training system;(14)   Drawing and color as a basic course training system;(15) Introduction to Design and Tileboard Course Training System;(16) Construction of innovation and entrepreneurship platforms;(17) Establishing modes of cooperation between industry, university and research;(18) Enhancing students' teamwork ability;(19) Student motivation and autonomy in learning.

This research finding was in accordance with the theories or research of Miaomiao, Xue(2022) which was found that As the main position for cultivating professional display design talents, colleges and universities were faced with the major task of how to cultivate high-level display talents with outstanding professional ability and high comprehensive quality for the country and the society oriented to the needs of social development. Also, the findings were in the same direction with Zhou Yu (2021). Moreover, from the research of Hu Yuxuan (2020) it was found that the history and current situation of display design, and discussed in detail the current problems of display design through specific improvement measures such as strengthening students' comprehension ability, enhancing students' innovation ability, promoting the cultivation of market ability, and establishing an effective teaching system, so as to make display design feasible.

Therefore, the five components in the research findings were important in building the management of the display design programme and were an important means of improving the display design programme. The joint development of the five components can bring more opportunities for the future of the display design major.

7. Recommendations

Based on the research findings, the following recommendations were proposed in three key aspects:

7.1 Recommendation for Policies Formulation:

Strengthening the process management and organizational efficiency of professional education in display design. Establishment of an ecosystem for education in the display design major and promotion of the sustainable development of education in

the display design major. Establish design education, establish, and improve major in display design education management system. Innovative talent training mode and means to cultivate innovative and complex talents in the display design major. Improve the design skills of teachers and students and build high quality management and teaching teams.

7.2 Recommendation for Practical Application:

To facilitate the development of display design professional education, the following strategies can be explored:

Improve design education management institutions, set up special display design professional education organizations, and industry associations and enterprises to strengthen ties and enhance the quality monitoring of display design professional education. Build a long-term mechanism for design feedback, form a good design and employment order, and promote the educational reform of display design major. Promoting the reform of the education mechanism of the display design programmer. Promote the reform of the teaching innovation mode of the display design major and build a platform for teachers and students to design discipline competitions, international design exchanges, and independent research. Serving the growth needs of students, promoting the development of their future abilities, and improving the quality of employment for display design students.

7.3 Recommendation for Further Research:

In order to solve the existing problems in the development of the display design major and application-oriented talents and employment and entrepreneurial talents, future research should focus on three key areas:

1)Further verify the rationality and scientific of the effective components of professional competency training for display design students in Guangdong Province.

2)Further apply the management policy to colleges and universities in Guangdong Province, and to promote the development of education and management of professional competency for display design students in Guangdong Province.

3) The similar research topics were verified and confirmed according to the research samples of different provinces (cities), so as to enhance the generalizability of the relevant research conclusions of this paper.

By collectively embracing research recommendations, stakeholders in the education sector can work together to create a supportive ecosystem that fosters effective managerial guidelines for students of display design in colleges and universities under

Guangdong Province the successful implementation，improving the professional competency of students and training comprehensive application design talents to serve the development of Guangdong Province.

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