



**THE IMPROVEMENT OF TALENT CULTIVATION
PROGRAM FOR DIGITAL MEDIA ARTS MAJORS IN
VOCATIONAL UNDERGRADUATE COLLEGES BASED ON
THE PDCA MODEL
--A CASE STUDY OF DIGITAL MEDIA ART MAJOR OF
SHANDONG ENGINEERING VOCATIONAL AND TECHNICAL
UNIVERSITY**

ZHAO XUTING

6517195038

**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE MASTER'S DEGREE OF BUSINESS
ADMINISTRATION GRADUATE SCHOOL OF BUSINESS**

SIAM UNIVERSITY


2023



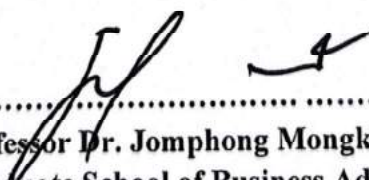
**THE IMPROVEMENT OF TALENT CULTIVATION
PROGRAM FOR DIGITAL MEDIA ARTS MAJORS IN
VOCATIONAL UNDERGRADUATE COLLEGES BASED ON
THE PDCA MODEL
--A CASE STUDY OF DIGITAL MEDIA ART MAJOR OF
SHANDONG ENGINEERING VOCATIONAL AND TECHNICAL
UNIVERSITY**

ZHAO XUTING

This Independent Study has been Approved as a Partial Fulfillment of the Requirement
of International Master of Business Administration

Advisor: 
(Dr. Jidapa Chollathanratanapong)

Date: 14 / March / 2024


(Associate Professor Dr. Jomphong Mongkhonvanit)
Acting Dean, Graduate School of Business Administration

Date 26 / 4 / 2024
Siam University, Bangkok, Thailand

Title: The Improvement of Talent Cultivation Program for Digital Media Arts Majors in Vocational Undergraduate Colleges Based on the PDCA Model--a case study of Digital Media Art Major of Shandong Engineering Vocational and Technical University
By: Zhao Xuting
Degree: Master of Business Administration
Major: Education Management

Advisor:
.....
(Dr.Jidapa Chollathanratanapong)

.....
14, March, 2024
.....

ABSTRACT

With the rapid development of digital technology, the digital media art specialty has become a field of great concern. Vocational undergraduate colleges need to adopt a more effective training mode in order to adapt to the social demand for digital media art talents and cultivate more excellent digital media art talents. Based on the PDCA model, this paper carries out an in-depth research and analysis on the cultivation of digital media art professionals in Shandong Engineering Vocational and Technical University. The objectives were : 1) To analyze the status quo of digital media art professional talent cultivation program of Shandong Engineering Vocational and Technical University; 2) To propose targeted optimization and improvement measures based on PDCA model of Shandong Engineering Vocational and Technical University.

The paper mainly adopted qualitative research, through the in-depth interview with 40 students of digital media art majors in Shandong Engineering Vocational and Technical University, to understand their learning and internship process of the actual needs, confusions and expectations, to provide more targeted information for the study. Provide more targeted information for the study.

The paper found that : 1) The talent cultivation program for digital media art majors of Shandong Engineering Vocational and Technical University has the problems of insufficiently clear talent cultivation objectives, shifted curriculum focus, and a single talent cultivation method; students' knowledge cannot be aligned with the market demand; the construction of teachers is not perfect; and the school lacks the cooperation with other colleges and universities and the digital media industry; 2) Based on the guidance of the PDCA model, Shandong Engineering Vocational and Technical University should firstly to improve the measures at plan stage ; conduct an in-depth analysis and research on market demands and trends, clarify the training objectives; rationalize the curriculum and promote the diversification of curriculum teaching modes;

secondly to improve measures at the Do stage should reform the practice teaching system and strengthen the university's management of practice teaching; actively implement inter-university cooperation and cooperation with other institutions to share resources and best practices; at the same time, strive to supplement and enhance the level of teacher training and implement continuous teacher training. Inter-university cooperation with other institutions and the digital media industry to share resources and best practices; at the same time, committed to replenishing and upgrading our faculty and implementing continuous faculty training; thirdly to Check link improvement measures, have to ensure the effectiveness of the curriculum through performance evaluation of students' academic performance and program performance; after implementing optimization, enter the check stage to evaluate the effectiveness of the adjusted talent training program and Act Session should identify problems in a timely manner, summarize the experience, revise the objectives, and return to the planning stage promptly. Continuously adjust the talent training program until the desired effect is achieved. Through exploring a more reasonable talent training program, continuous improvement enhances the quality of school education in order to meet the social demand for high-quality digital media art professionals.

This study pursues the continuous optimization and improvement of digital media professional talent cultivation under the PDCA model to create a more sustainable and developmental future for the digital media art professional talent cultivation program of Shandong Engineering Vocational and Technical University. Through this process of improvement inquiry, the study expects to provide students with a first-class digital media art education that will make them stand out in the workplace and contribute more valuable talents to the development of the digital media industry in the society.

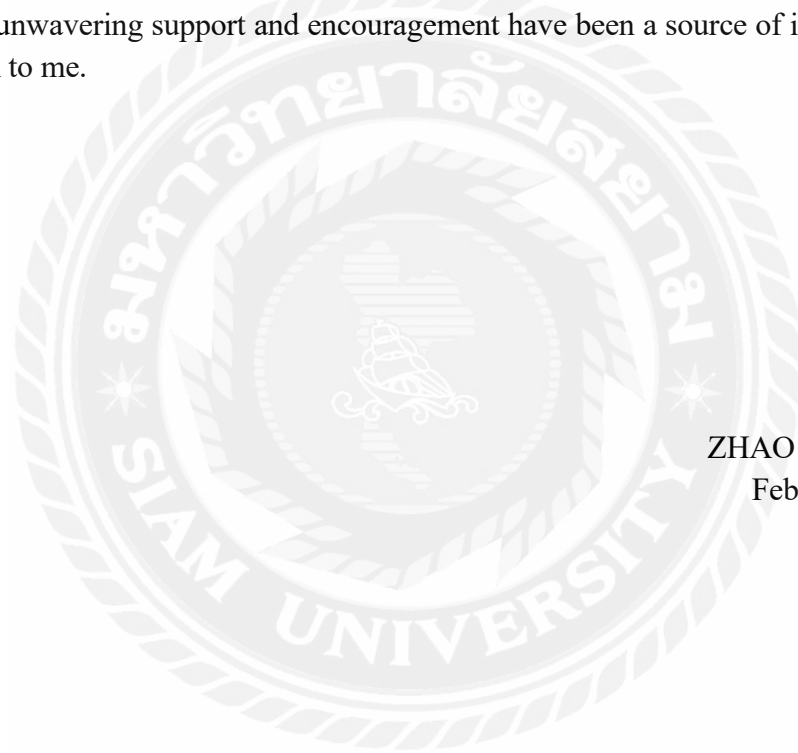
Keywords: PDCA model, Improvement of talent training programs, digital media arts major, vocational undergraduate education

ACKNOWLEDGEMENT

I would like to express my deepest gratitude to my advisor Dr. Jidapa Chillathanratanapong, for her invaluable guidance, support, and encouragement throughout my independent study. His insightful comments and constructive criticism have significantly improved the quality of my work.

Additionally, I am grateful to Associate Professor Dr. Jomphong Mongkhonvanit, Dean, Graduate School of Business, for his support and encouragement throughout my studies. His dedication to the graduate program and commitment to excellence have inspired me to strive for academic excellence.

Finally, I would like to extend my appreciation to all the faculty members and staff of the Siam University who have contributed to my growth and development as a student. Their unwavering support and encouragement have been a source of inspiration and motivation to me.



ZHAO XUTING
Feb 20, 2024

Declaration

I, Zhao xuting, hereby certify that the work embodied in this independent study entitled “Study on the Improvement of Talent Cultivation Program for Digital Media Arts Majors in Vocational Undergraduate Colleges Based on the PDCA Model-- Taking Digital Media Art Major of Shandong Engineering Vocational and Technical University as an Example” is result of original research and has not been submitted for a higher degree to any other university or institution.

ZHAO XUTING

(ZHAO XUTING)

Feb 20, 2024



CONTENTS

ABSTRACT.....	I
ACKNOWLEDGEMENT	III
Declaration.....	IV
CONTENTS.....	V
Chapter1 Introduction	1
1.1 Background of the Study.....	1
1.2 Questions of the Study	3
1.3 Objectives of the Study	3
1.4 Scope of the Study.....	4
1.5 Significance of the Study	4
1.5.1 Theoretical Significant.....	4
1.5.2 Practical Significance.....	5
Chapter2 Literature Review	6
2.1 PDCA model.....	6
2.2 Vocational undergraduate education	8
2.3 Talent development for digital media arts majors	10
Chapter3 Research Methodology.....	13
3.1 Introduction.....	13
3.2 Sampling and sample size	13
3.3 Research design.....	13
3.4 Data collection.....	16
3.5 Data analysis	16
Chapter4 Findings.....	17
4.1 Introduction.....	17
4.2 Talent Cultivation Objectives.....	17
4.3 What students learn	17
4.4 Faculty development issues.....	19
4.5 Corporate Partnerships	20
Chapter5 Conclusion and Recommendation.....	21
5.1 Introduction.....	21
5.2 Current situation of the talent training program for digital media art majors in Shandong Engineering Vocational and Technical University.....	21

5.3 Improvement program and suggested programs based on the PDCA(Plan-Do-Check-Act)model	21
5.3.1 Plan session improvement measures.....	22
5.3.2 Do link improvement measures	23
5.3.3 Check link improvement measures	24
5.3.4 Plan session improvement measures.....	24
5.4 Recommendation.....	21
5.5 Research limitations	26
5.5.1 Sample limitations	26
5.5.2 objectivity and bias of respondents.....	26
5.5.3 Time constraints.....	26
5.5.4 Applicability of the PDCA model.....	26
5.5.5 Limited access to information.....	27
5.5.6 Consistency and reproducibility.....	27
References.....	28
Appendix.....	31

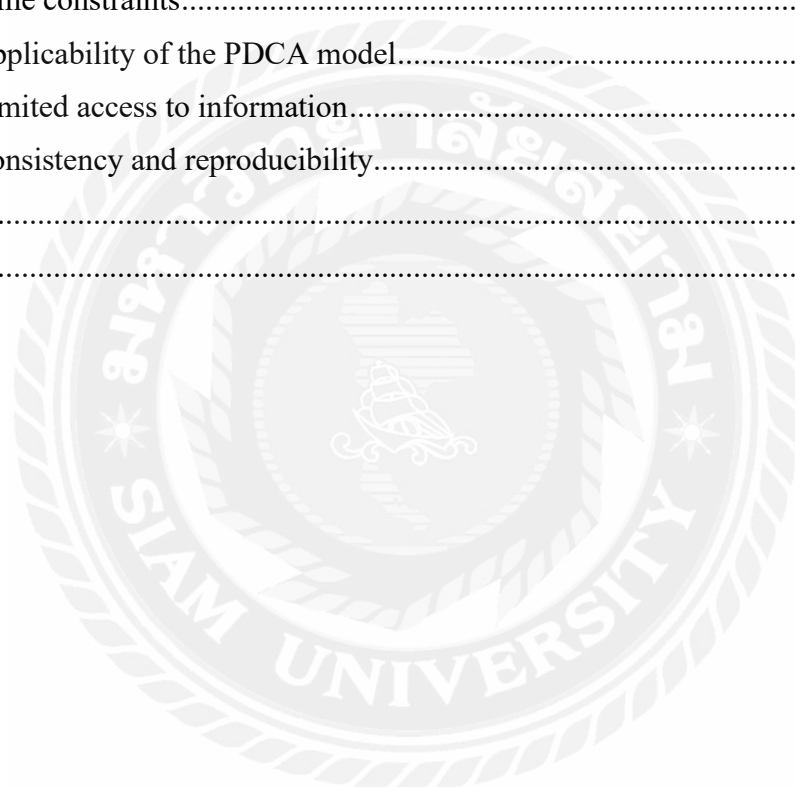


TABLE CONTENTS

Table 3.3 Composition of the interview questionnaire..... 14



FIGURE CONTENTS

Figure 2.1 PDCA model 8



Chapter1 Introduction

1.1 Background of the Study

The development history of the digital media arts major reflects the development from scratch, from single to diversified. In the early days, the digital media art major focused mainly on computer graphics and animation production, however, with the advancement of science and technology and the change of social demand, the major has been expanded to include interactive design, virtual reality, digital games, film and television special effects and other fields. The major is based on art, design and art education as the main line, and contemporary network technology integration, training to adapt to the needs of socialist modernization, moral, intellectual, physical, aesthetic and labor all-round development, with solid knowledge of media theory and digital art modeling ability, creative digital art design and media-related disciplines, with strong adaptive ability of the application of high-level digital media art and design talents. (Jia,2020)

The digital media art industry has an increasingly strong demand for professionals, which makes the training of digital media art professionals an urgent issue. There are some problems in the cultivation of talents in the current digital media industry. First of all, the number of digital media talents can not meet the demand of the society. Secondly, due to the late opening of the digital media art profession, the relevant theoretical research and practical exploration is not deep enough, and the current development is still immature. In the process of specific teaching practice, traditional teaching methods are still used, which to a certain extent affects and restricts the effectiveness of teaching and the realization of the results of educating people, and is out of touch with the actual needs of society for professionals. (Zhang, 2022) Some colleges and universities specializing in digital media are transformed from multimedia majors or animation production, film and television post-production, the content of talent training has not changed much, and the invisible imbalance between supply and demand can be easily formed. The phenomenon of disconnection between theory and practice is more serious, and the digital media talents cultivated can not adapt to the requirements of the vocational industry, and the professional practicality of operation is very weak, which is a great obstacle to the development of digital media majors and digital media education.

Digital media majors have the dual characteristics of engineering and art, with the professional characteristics of "art and industry combination". The cross-composite nature of the disciplines involved in the digital media profession is unprecedented in traditional art education, which is a breakthrough and a bridge to the current state of compartmentalization in art education. (Fu, 2013) On the one hand, digital media art will be combined with other types of art to create more creative and unique works; on the other hand, digital media art will be cross-fertilized with different fields, such as artificial intelligence and big data, to open up more application scenarios. In addition,

the digital media art industry will further move towards standardization and standardization, creating more favorable conditions for talent training.

Industry statistics show that the market demand for digital media art talents is huge. The employment field of digital media art talents is very wide, including animation and animation design, advertising design, visual design, network media, cultural and creative design, entertainment presentation, electronic game planning and design, cell phone value-added, digital television, digital radio, digital film and other fields. For professional education, it needs students to be able to bring their creative power into play through digital expression, to build a new knowledge system, to optimize and upgrade their professional cognition in the continuous accumulation of digital creation experience, so as to adapt to the development and change of the digital era (Wang, 2020).

In the face of the development trend of digital media art industry, the importance of digital media art professional training in vocational undergraduate colleges and universities is self-evident. The development of vocational undergraduate education is not only the key to build a high-quality modern vocational education system, but also the sign of vocational education as a type of education. (Liu,2021) First of all, vocational undergraduate colleges can deliver a large number of digital media art talents with professional skills and practical ability to the society and meet the demand of industry development. Secondly, vocational undergraduate colleges can cultivate students' innovative consciousness and comprehensive quality, so that they have stronger market competitiveness and adaptability. Finally, vocational undergraduate colleges can also promote the technological innovation and industrial upgrading of the digital media art industry through the cooperation between industry, academia and research.

The training of digital media art professionals is mainly distributed in different types of educational institutions such as vocational undergraduate colleges and universities, general colleges and universities as well as art colleges. Vocational undergraduate education is the undergraduate level in the modern vocational education system, belonging to the vocational education type of undergraduate education. Vocational undergraduate education not only has a type of boundary, but also highlights the height of undergraduate education in the educational level. Vocational undergraduate education has the genes of vocational education since the beginning of its creation, following the logic of occupation and the law of work to cultivate technical and skilled talents. (Ma, 2021)

Shandong Engineering Vocational and Technical University (SEVTU), a pilot vocational undergraduate institution in Shandong Province, bid to set up a digital media art major in 2020, relying on the higher vocational majors of art such as animation production technology and advertising design and production. The construction goal of this major is to closely integrate the needs of the development of cultural and creative industries in Shandong Province, closely focus on the new requirements for talent training in the field of digital creative design technology and vocational positions, adhere to the road of internal development, take the integration of industry and

education, school-enterprise cooperation as a breakthrough, implement the open running of schools, and strive to carry out the integration of curricula, teaching materials and practical training environment for project teaching. strive to build a key program of vocational education at the undergraduate level with good teaching conditions, distinctive professional characteristics, advanced teaching management, strong teaching staff and high teaching quality among similar programs in vocational colleges and universities in China through the efforts of about five years. It will become a training base for high-level technical and skilled talents in the design category of cultural and creative industries in the region, and effectively drive the development of similar majors in the college through teacher training and resource sharing.

1.2 Questions of the Study

The core objective of this study is to deeply analyze the cultivation status of digital media art professionals in Shandong Engineering Vocational and Technical University and the problems they face, and to propose targeted solution strategies. In the process of research, it is found that the digital media art program of Shandong Engineering Vocational and Technical University has the following problems and deficiencies, such as: talent training objectives are not clear enough, a single way of talent cultivation, the focus of the curriculum has been shifted, the construction of faculty is not perfect, the knowledge learned by the students can not be aligned with the market demand, and the lack of school-enterprise cooperation units to the counterpart.

The specific research problems of this paper are as follows:

1. What is the current situation of the talent training program for digital media art majors in Shandong Engineering Vocational and Technical University?
2. How to put forward targeted improvement measures and suggested programs based on the PDCA (Plan-Do-Check-Act) model?

1.3 Objectives of the Study

This paper takes the digital media art professional training program of Shandong Engineering Vocational and Technical University as the core of the research, and comprehensively examines and analyzes the problems revealed in the process of digital media art talent training. Drawing on the PDCA (Plan-Do-Check-Act) model, this paper tries to put forward targeted improvement measures and suggestions. The research includes the establishment of talent cultivation goals, adjustment of talent cultivation mode, optimization of teaching resources allocation, enhancement of the quality of the teaching staff and strengthening of practical teaching links and other issues. It is hoped that this study can provide a more scientific and reasonable training program for the cultivation of digital media art talents, and further promote the vigorous development of digital media art majors in Shandong Engineering Vocational and Technical University. At the same time, it is hoped that this study can provide useful reference for the

cultivation of digital media art professionals and help the sustainable development of the school's digital media art program.

1. To analyze the current situation of the talent training program for digital media art majors in Shandong Engineering Vocational and Technical University.

2. To propose targeted improvement measures and suggested programs based on the PDCA (Plan-Do-Check-Act) model.

1.4 Scope of the Study

This study focuses on the talent cultivation of digital media art majors in Shandong Engineering Vocational and Technical University. By reviewing 80 related literature materials and choosing 30 of them as the key reference content, sorted out the research results of the talent cultivation of digital media art majors in China, and compared and analyzed the discussion of talent cultivation mode by different researchers.

This paper takes 40 students in Shandong Engineering Vocational and Technical University (SEVTU) who are in the internship period of the digital media art major in the class of 2020 as the research object, in order to understand the status quo and problems of talent cultivation of digital media art majors in SEVTU, and to study and understand the actual needs, confusions, and expectations of their learning and internship process, so as to support the answers to the questions and the suggestions for improvement; by exploring the existing cultivation program of this major status quo, focusing on how to improve the talent cultivation program of the digital media art major based on the PDCA model (Plan-Do-Check-Act) and using the four stages of the model as the guiding principles.

1.5 Significance of the Study

1.5.1 Theoretical Significant

PDCA model is a systematic and cyclic management method, which is widely used in quality management and process optimization in different fields. Introducing it into the study of improving the talent cultivation program for digital media art majors can provide systematic and scientific guidance for this field. In the "planning" stage, formulate training objectives and programs that meet the needs of the times and the development trend of the industry, so as to ensure that can cultivate digital media art talents that are more in line with the requirements of the industry. In the "implementation" stage, innovative teaching methods and new technologies are implemented to improve students' practical ability and creativity. In the "checking" stage, problems are identified and adjustments are made in a timely manner by evaluating students' academic performance and career development after graduation. Finally, in the "adjustment" stage, based on the feedback information of the inspection stage, the cultivation program will be further improved, forming a virtuous cycle system.

1.5.2 Practical Significance

Digital media art is a field full of innovation and constant change, and in order to cultivate professionals with comprehensive abilities, it is necessary to keep up with the development trend of the industry, and the introduction of the PDCA model will encourage schools to pay more attention to the actual occupational needs, and flexibly adjust the curriculum, practical links and teaching methods to ensure that students have the core skills and innovative thinking required by the industry when they graduate. In addition, the PDCA model can help schools establish an effective quality management system, improve the quality of teaching, provide students with better educational resources and learning environment, and enhance their competitiveness in the job market.



Chapter2 Literature Review

2.1 PDCA model

The PDCA model, also known as the cyclic PDCA or Deming cycle, is a widely used methodology for quality management and continuous improvement. Proposed by quality management expert Edward Deming, the model consists of four phases - Plan, Do, Check and Act - to form a cycle of continuous improvement.

In the Plan phase, the organization needs to define the improvement goals and develop related plans, including identifying problems, collecting data, analyzing the causes of the problems, and determining the improvement goals. Next, specific programs and plans are developed; the implementation phase mainly consists of executing the plan and data collection. In this phase, the team needs to start implementing the plan according to the plan, and at the same time, actual data should be collected during the implementation process to provide a basis for subsequent inspection and evaluation; the inspection phase mainly analyzes the data in the implementation phase and evaluates whether or not the expected goals have been achieved. This involves comparing and validating the data and indicators during the implementation process. In addition, problems in the implementation process need to be identified for further improvement. During the implementation phase, the plan needs to be adjusted if problems or room for improvement are identified during the checking phase. Continuous improvement is then carried out during this phase, lessons learned are summarized, and a new improvement plan is proposed. These lessons are fed back into the next PDCA cycle, making the process iterative.

The PDCA model is an iterative management methodology that enables organizations to progressively optimize their business processes and improve quality, efficiency and innovation by continuously cycling through the four phases. This approach is widely used in manufacturing, service industries, project management, education management and other fields.

The "Deming Circle" is proposed by Deming, the father of quality management, and is also called the PDCA cycle. The PDCA model is a widely used method of total quality management, which is carried out through a four-stage cycle of Planning, Doing, Checking and Acting. These four procedures are divided into eight steps: (1) analyze the current situation to find out the problems (2) analyze various influencing factors (3) identify the main factors (4) take measures and make plans (5) implement the plans made (6) check the results (7) standardization (8) leftover problems to the next PDCA cycle. (Ge, 2006) In the field of education and teaching, the PDCA model also has a wide range of application value, which can make continuous improvement of the work process, the program now spiral state. After each cycle, some problems will be solved, the process management and quality management level will rise to a new height, so there are new and higher goals, on a new basis to continue the PDCA cycle. (Dong, 2022)

Early studies by Chinese scholars have suggested that the educational significance of the Deming Cycle is that it makes us realize that every program and every task, from the school as a whole to every class and every individual, can and should have a cyclical process, and that this cycle is constantly moving forward and expanding. Or rather, should have a sense of quality that applies this cyclic wheel and keeps moving upward for never-ending improvement and enhancement. One of the main principles of TQM is the "principle of wholeness", and the implementation of TQM in schools means that students must also be actively involved. (Zhao, 1998)

By studying some of the existing related papers, it can be seen through combing that domestic scholars are relatively rich in research on the application of Deming's ring in education. Chinese scholars have focused more on the theoretical direction for the application of the PDCA cycle of Deming management. From 2000 to 2010, the main scholars who studied Deming's management ideas in China are Su Weilun, Zhao Tao, Gao Lin, Huang Liushan, Qiu Youquan, Zhao Zhongjian, Cheng Fengchun and so on. (Yu, 2012)

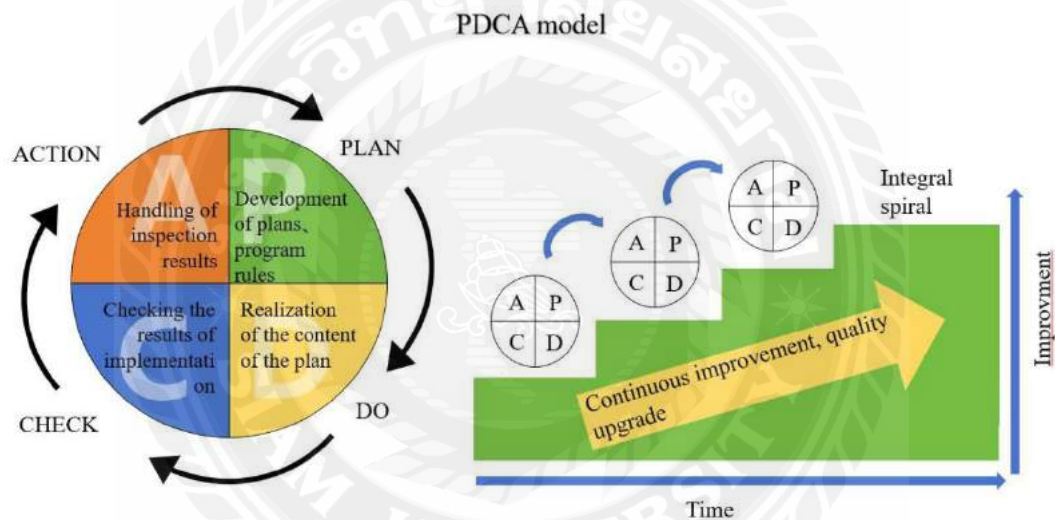
Teaching activity itself is also a kind of teaching quality management activity, and the application of PDCA cycle quality management system has been extended to vocational education with corresponding improvement and enhancement effects. (Wang, 2022) Teaching quality management is also a special kind of total quality management, which can also be organized using a management model similar to the Deming cycle. This management model is divided into four stages: the development of teaching programs, the implementation of teaching programs (teaching process) teaching quality testing, information feedback and correction! They are equivalent to the planning, implementation, checking and processing of the Deming cycle. (Zhang, 2004)

In the field of education, the Deming Ring Model has been applied to curriculum reform, teaching quality improvement, education management and other aspects. Scholars have proved the effectiveness and applicability of the Deming Circle Model in education management and teaching reform through theoretical discussions and practical studies (Li, 2014). At different stages of the "PDCA Cycle" education model, the monitoring measures and programs should be improved with the times; when the quality of teaching is significantly improved, the successful experiences should be summarized and promoted accordingly, and the lessons learned should be further reflected on. Only in this way can uninterrupted quality monitoring improve the effect of teaching quality monitoring step by step. (Zhou, 2018)

Scholar Wang Lijuan believes (2023) that applying the PDCA model to teaching is a method of comprehensive control of the teaching process, i.e., using the PDCA cycle theory to formulate teaching objectives, complete teaching tasks, and practicing the teaching process by using the cyclic system of Plan → Teaching (Do) → Assessment (Check) → Evaluation and Reflection (Act) for tracking and improving the quality of teaching. Improvement. A teaching unit is a PDCA cycle system, and the internal teaching process is a small cycle system. In this way, level by level, ring by ring, the whole teaching work organically linked, coordinated and common development, and

constantly improve the teaching method, so as to effectively improve the quality of teaching management level.

In the process of improving teaching quality and promoting the rapid development of higher vocational colleges and universities, the reform of teaching mode is carried out throughout the higher vocational education, and the reform of teaching mode under the PDCA cycle is based on the main body of the students, which is closely related to the economic and social development, vocational standards and job requirements, and combines the teaching process with the actual production. The reform of teaching mode based on PDCA cycle can continuously improve teaching methods and means, stimulate students' endogenous motivation to learn, improve the quality of teaching, and create an ecological value chain for promoting the integration of industry and education and realizing the high-quality development of higher vocational colleges and universities.(Wang, 2023)



2.2 Vocational undergraduate education

With the rapid development of China's economy and society, there is a growing demand for high-quality and high-skilled talents. Against this background, vocational undergraduate education came into being, and with its unique cultivation concept and mode, it has become an important cradle for cultivating future workplace elites. Vocational undergraduate education is an educational model centered on cultivating students' vocational skills and practical application ability. Compared with the traditional theory-oriented undergraduate education, vocational undergraduate education is an education mode that focuses on practice, is close to the industry and cultivates comprehensive quality. Vocational undergraduate education emphasizes more on the combination of academic knowledge and actual occupational needs, aiming to

help students enter a specific occupational field smoothly and be able to perform the related work.

The development of vocational undergraduate education is an important strategic task to meet the transformation of social and economic structure, optimize the structure of higher education and build a modern vocational education system. (Xiong, 2023) Holding vocational undergraduate education is the external demand of modern industrial optimization and innovation. In the new era, new industries and technologies keep emerging, and informationization, dataization and intelligence make the system connected and function integrated. Industrial transformation and upgrading, iterative updating of technology and profound changes in production management mode, the demand for job competence of technical talents has changed from single job skills to composite, cross-border and innovative skills. (Zhang, 2022)

With the development of social economy, vocational undergraduate education has gradually been emphasized. Domestic scholars' research on vocational undergraduate education mainly focuses on talent cultivation mode, curriculum system, teaching methods and other aspects. Among them, scholars believe that vocational undergraduate education should focus on the cultivation of students' practical ability and strengthen the docking of the curriculum with the needs of the industry (Luo, 2023).

In the study of Liu Xinke (2023), it is mentioned that the high-quality technical and skilled talents cultivated by vocational undergraduate education are the high-caliber composite talents who combine high-level technical skills with high-level professional theoretical knowledge, and who are able to realize the work program or complete a series of operations in a concrete way. Vocational undergraduate training of high-quality technical and skilled personnel can improve the vocational education personnel training system, reform the training mode of high-quality technical and skilled personnel, and enhance the social status of vocational education. This is of great practical significance for realizing the strategic goal of promoting the high-quality development of vocational education, conforming to the transformation of high-tech industries and promoting the construction of a skill-based society.

Vocational undergraduate education as both the dual attributes of vocational education and higher education (Liao, 2017). It is not only entrusted with the important mission of cultivating high-quality technical and skilled talents, but also bears the responsibility of realizing the matching between the demand side of industry and the supply side of education. In this process, vocational attributes are regarded as the primary attributes of vocational undergraduate education, aiming to provide society with high-quality technical and skilled talents with value, continuity and specialization.

In Zhou Jing's (2023) study, he argued that vocational undergraduate education should be based on its basic attributes, fully exploiting students' potentials and cultivating their comprehensive abilities in theoretical knowledge, technical skills, core job occupations and innovative and practical abilities, so as to lay a solid foundation for their professional careers. At the same time, vocational undergraduate education should also provide students with opportunities to advance to high-level professional master's

or doctoral degree programs, helping them achieve higher levels of success in their academic and professional careers.

In exploring the development thinking of vocational undergraduate education, some scholars believe that: vocational undergraduate education needs to focus on the depth of the integration of industry and education, innovate the path of seamless connection between vocational undergraduate education and teaching and enterprise production, incorporate the practical teaching of enterprise production into education and teaching, and promote the deep participation of industrial enterprises in the whole process of the construction of vocational undergraduate education and teaching, and in the whole process of promotion, need to coordinate the vocational undergraduate education, enterprises and urban and rural areas scale and structure of development, establish and improve the mechanism of in-depth cooperation between schools and enterprises seamlessly running schools, and establish and improve the education and teaching mechanism of industry-industry integration that matches the scale of school running and the requirements of enterprise production practice teaching. (Xu, 2023)

School-enterprise collaborative education is an important way in the talent training program of vocational undergraduate. Zhang Ge (2023) puts forward the view that school-enterprise cooperation and collaborative education can introduce the advanced production technology skills of enterprises into teaching, enrich teaching resources, and make talent cultivation buttress the needs and standards of enterprise positions. He believes that this not only makes education and teaching more targeted, but also allows students to understand the future working environment of the industry in advance, and exercise and improve their professional skills in school-enterprise cooperation and co-education.

2.3 Talent development for digital media arts majors

Talent cultivation program of digital media art is a set of teaching plan and cultivation system formulated by higher education institutions to achieve the goal of cultivating professional talents in the field of digital media. The core objective of this program is to make students proficient in the theoretical knowledge and practical skills of digital media art, so as to lay a solid foundation for them to enter the digital media industry. In this training program, emphasis is placed on the cultivation of students' creativity and technical skills so that they can stand out in the digital media field. Through systematic study of the theory and practice of digital media arts, students will be equipped with the professionalism required for development in the industry.

The Digital Media Arts Program is committed to providing students with a comprehensive and practical educational experience. Through systematic study and practice, students will be equipped with the creativity and technical skills needed to thrive in the digital media industry, laying a solid foundation for their careers.

In the context of new liberal arts, domestic scholars pay attention to the reform and practice strategies of digital media arts professional curriculum. Zhou Shiming and Wang Minghe (2022) proposed a set of reform and practice strategies for digital media

art major curriculum in the context of new liberal arts, including curriculum system reconstruction, teaching method reform and collaborative education between industry, academia and research. They advocate a student-centered approach to strengthen the interface between curriculum and industry needs in order to cultivate students' innovative and practical abilities.

Wu Yunyi (2019) believes that digital media art majors should take into account the overall development of students while cultivating their technical abilities, focus on cultivating innovative design awareness, and construct a comprehensive ability training curriculum system to ensure that the profession is tailored to the needs of the students. Such an educational model helps to cultivate more excellent digital media art professionals, contributing to the development of related industries in China.

Digital media art is a discipline with strong inter-specialization, based on the balanced development of digital media art talent training, must be in line with the digital media profession of "art + information technology" as an essential feature, from talent selection to talent training, and then to the final practice of talent, should always be "elemental balance" as the guideline for constructing the talent cultivation model, taking art literacy and information literacy as the core content (Zhou, 2018)

Wang Wen (2022) mentioned in his research that the professional characteristics and the reason for the emergence of digital media art determines that it cannot be presented in a traditional art style like other traditional art professional education. Accordingly, the professional education mode and talent cultivation mode are also very different from the traditional art professional education mode, and the requirements for talent cultivation are naturally different. Considering that the structure of digital media art is complex and involves many disciplines, the construction of the curriculum system must be highly comprehensive. Combined with the specific objectives and requirements of talent training, the professional curriculum needs to follow the principle of frontier, practice, technology integration, adhere to the skills-based, application-oriented talent training guidelines, to improve the students' digital media art operation ability for the purpose of constructing practical courses, so that they can fully grasp the relevant art theory and computer knowledge, and then flexibly apply these technologies and knowledge to service production practice.

The biggest difference between digital media art and other art majors is that their update speed is faster, so the rapid development of the digital media industry also determines the digital media art professional talent training must have the foresight and flexibility to follow the traditional undergraduate four-year art professional talent training model, after the students graduate in four years, the digital media art students may not be fully equipped to adapt to the development needs of the digital media industry, knowledge and ability, so to look forward to the direction of the development of the digital media industry, the curriculum is divided into the new liberal arts background of interdisciplinary talent cultivation of digital media art (Hou, 2022) Knowledge and ability to meet the development needs of the digital media industry, so it is necessary to look forward to the direction of the development of the digital media

industry, the curriculum is divided into the new liberal arts background of the digital media arts major interdisciplinary talent training research (Hou, 2022)

Wu Fan (2023) and others proposed in their study on the analysis of characteristic talent cultivation methods for digital media art majors that most of the current research on talent cultivation for digital media art majors focuses on the analysis of existing problems and some specific solutions, but lacks the research on overall strategies and cultivation paths. Digital media art majors should be aligned with the new needs of the digital culture industry in the new era, update and optimize the cultivation objectives and curriculum design of the existing digital media art majors, and at the same time, extend and expand the growth points of digital media art disciplines to accelerate the reform and innovation of the talent cultivation mode.

In the study of innovation and entrepreneurship talent cultivation mode of digital media art major under the background of first-class professional construction, Yang Jing (2023) and others proposed that carrying out social practice and school-enterprise cooperation enriches the extension of the dual-creation talent cultivation mode, which not only provides a broad space for students to perform, but also allows the talent cultivation program and teaching plan, which were birthed by combining the idea of dual-creation talent cultivation in the previous period, to be tested in the practice, and in turn promotes the specialty's talent cultivation mode. In turn, it promotes the program to make constant adjustments to the talent training program and teaching plan, and ultimately realizes the benign cycle of talent cultivation.

Chapter3 Research Methodology

3.1 Introduction

The paper adopted qualitative research method. Literature analysis, design interview. Literature analysis is mainly through the review of related literature, combing the research results of talent cultivation of digital media art majors at home and abroad. By comparing and analyzing different researchers' discussions on talent cultivation mode, it can be found that there are differences in talent cultivation objectives, curriculum, teaching methods and other aspects of digital media art majors. The literature analysis provides the theoretical basis and foundation for this study.

3.2 Sampling and sample size

The interviewees of this study were 40 students in Shandong Engineering Vocational and Technical University, class of 2020, majoring in digital media art who were in the internship period, and the success rate of students' participation in the interviews was 100%.

3.3 Research design

The interviewees of this study were 40 students in Shandong Engineering Vocational and Technical University, class of 2020, majoring in digital media art who were in the internship period, and the success rate of students' participation in the interviews was 100%.

Through in-depth interviews with students majoring in digital media arts at Shandong Engineering Vocational and Technical University, were able to gain insights into their real needs, troubles and expectations in the process of study and internship. After collating, studying and analyzing the interview data of 40 students, found that students majoring in digital media art not only pay attention to the improvement of technical skills, but also attach importance to the cultivation of innovation and practical ability. At the same time, they expect the school to provide a more comprehensive training program to help them better adapt to the social needs and career development.

The interview questionnaire was designed around the PDCA model, and the interview outline was designed from the four stages of Plan, Do, Check and Act, with a total of 24 questions. The target of the interview was targeted at 40 students in the internship period of the digital media art program of Shandong Engineering Vocational and Technical University in the class of 2020.

The first part of the questionnaire, Plan, focuses on the teaching mode, disciplinary settings and practice opportunities, in order to clarify the cultivation objectives and positioning of the school's digital media arts program. The second part of the questionnaire, Do, focuses on the implementation of the program, covering the quality

of teaching and student participation. The third part of the interview, Check, focuses on the internship status of digital media arts students and their feedback on the training program. The last part of the interview, Act, focuses on whether the school has formulated specific improvement plans for the training program of digital media art majors, such as adjusting the curriculum and optimizing the practical aspects. Through the design of the interview questionnaire in the above four stages, it helps to understand the cultivation program of digital media art majors in an all-round way, find out the potential problems, and put forward targeted improvement measures. Thus, the professional training mode is continuously optimized to ensure that students enjoy better quality education and better employment prospects. The questions are designed according to the PDCA model as follows:

Table 3.3 Composition of the interview questionnaire

Plan:	<p>1. Goal Setting:</p> <p>(1) For the digital media arts major, what do you think should be the core objectives of an ideal training program?</p> <p>(2) What do you think are the most important skills or competencies in a training program for this major?</p>
	<p>2. Curriculum design:</p> <p>(3) Do you think the curriculum offered by the school meets the actual needs of the digital media arts industry?</p> <p>(4) Are there specific courses or skills that should be emphasized more or added to the curriculum?</p>
	<p>3. Practical opportunities:</p> <p>(5) What do you think is the importance of students' access to practical experiences and project opportunities in the talent development program?</p> <p>(6) Does the school provide enough practical opportunities to support students' learning in the field of digital media?</p>
	<p>4. Resource support:</p> <p>(7) Does the school provide adequate resources and facilities to support student learning in digital media arts?</p> <p>(8) Are students satisfied or is there room for improvement with regard to software, tools and equipment in the field of digital media?</p>

Do:	<p>5. Curriculum implementation:</p> <p>(9) What is your opinion of the way the current curriculum is being implemented? Are these approaches considered effective in supporting student learning and development?</p> <p>(10) Are students involved in real-world projects or opportunities to work with industry?</p>
	<p>6. Facility utilization:</p> <p>(11) Are the digital media arts facilities provided by the school adequate? Is there room for further enhancement?</p> <p>(12) Does the school provide an excellent learning environment to support the academic and creative development of students?</p>
	<p>7. Internships and cooperation:</p> <p>(13) Does the school offer opportunities for internships or partnerships with industry? What is the impact of these opportunities on students' career development?</p> <p>(14) Do students have opportunities to interact or practice with industry professionals?</p>
Check:	<p>8. Curriculum assessment:</p> <p>(15) What is your assessment of the quality and relevance of the current Digital Media Arts program?</p> <p>(16) Is there a need to restructure or update certain courses to keep up with industry developments?</p>
	<p>9. Learning experience:</p> <p>(17) Are students satisfied with the digital media arts learning experience provided by the school?</p> <p>(18) Are there any improvements that could be made to enhance the student learning experience?</p>
	<p>10. School support:</p> <p>(19) Does the school provide enough counseling and support to help students cope with the challenges of learning digital media arts?</p> <p>(20) Is the school perceived to be providing enough support to the</p>

	students?
Act:	11. Improvement plans: (21) Has the school considered improvements to the Digital Media Arts program? (22) Are there improvement plans underway or to be implemented based on student feedback?
	12. Change implementation: (23) Has the school taken specific actions to improve the digital media arts program? (24) Are there plans or measures in place to improve the quality of existing programs or provide additional support?

3.4 Data collection

In this study, interviews were designed to collect the required information from 40 students in the Digital Media Arts program of the class of 2020 at Shandong Engineering Vocational and Technical University (SEVTU) who were in the internship period.

3.5 Data analysis

Interviews were conducted from June to August 2023 to obtain relevant information, and the answers collected were analyzed and summarized according to the PDCA model.

Chapter4 Findings

4.1 Introduction

This study focuses on 40 students who are in the internship period of digital media art major in the class of 2020 in Shandong Engineering Vocational and Technical University, by designing interviews and collecting necessary information. After an in-depth study and analysis of the responses obtained, found that there are some problems in the talent cultivation program for digital media art majors in Shandong Engineering Vocational and Technical University, mainly including the lack of clear talent cultivation objectives, certain deviations in the curriculum, too single talent cultivation method; the disconnection between the knowledge students have learned and the market demand; the construction of faculty has not yet reached a perfect level; and there are challenges in terms of the school's lack of close cooperation with other colleges and universities as well as the digital media industry, and so on. Challenges in close cooperation with other institutions and the digital media industry.

Current situation of the talent training program for digital media art majors in Shandong Engineering Vocational and Technical University.

The current status of the talent training program for digital media art majors in Shandong Engineering Vocational and Technical University is as follows:

4.2 Talent Cultivation Objectives

The goal of talent training is not clear enough, the way of talent training is single, and the focus of the curriculum has been shifted.

The adjustment and updating of the cultivation objectives of digital media art majors closely follow the development of the information age and put forward new requirements for professionals. However, at this stage, the cycle of receiving feedback from schools is relatively long, and the active feedback from the demand side such as enterprise units is not sufficient. The curriculum lags behind the market demand, and the teaching of ordinary courses and the construction of faculty cannot meet the needs of the rapid development of the digital media market.

This not only increases the gap between the training objectives of digital media art professionals and the needs of the society, but also leads to the training objectives are too broadly stated and lack of refinement, which makes it difficult to provide effective guidance in the actual development of talent training programs. These problems together lead to the mismatch between the cultivated digital media art professionals and the actual needs of the society. Therefore, it is necessary to improve and optimize the talent training objectives from various aspects to achieve a close match between talent training and social demand.

Due to the lack of clear talent training objectives, the talent training mode shows a trend of homogenization. At present, digital media art majors mainly rely on curriculum teaching for talent cultivation. Although the requirements for practical courses and internship courses have been improved in recent years, and efforts are being made to build a student cultivation mode of school-enterprise cooperation, there are still the problems of a low proportion of practical courses in the actual operation process, difficult to quantitatively evaluate the effect of courses, and the low participation of social tutors. This cultivation mode leads to the limited ability of digital media art students in transforming their professional knowledge into practical application, the mismatch between the school's professional cultivation and the demand of enterprises, and the low applicability of the knowledge acquired by the students in the actual work, which makes the enterprises still need to invest time and money in retraining job skills after recruiting graduates majoring in digital media art, thus increasing the Employment cost of enterprises, unable to realize the smooth transition of students from university to society.

The digital media art major of Shandong Engineering Vocational and Technical College focuses too much on animation production and lacks interdisciplinary integration when setting up the curriculum at the initial stage, and the major covers many subject areas, such as art, programming, design, etc., which makes it difficult for the students to build a comprehensive knowledge system in the learning process, and thus they face greater limitations in employment.

Practical teaching links are particularly important in the curriculum of digital media arts, but the amount of practical teaching courses set up in the talent cultivation program is still on the low side compared to the amount of practice in digital media majors, which makes students deficient in practical operation ability. In order to improve these problems, it is necessary to adjust the curriculum, strengthen the practical teaching, and promote interdisciplinary integration, so as to improve the quality of talent training and make students better adapt to the needs of society.

4.3 What students learn

What students learn cannot be aligned with market demand.

At present, students majoring in digital media art at the vocational undergraduate level have not yet stepped into society and are in the internship period, but the enterprise industry has already reflected some common problems. First of all, the articulation problem between the knowledge learned by students and the market demand. At present, there is a widespread situation that the knowledge students learn cannot meet the market demand, which is mainly due to the lack of close integration between teaching, research and practice. Secondly, the updating problem of course teaching content. With the diversification of information channels, modern college students are exposed to a wider and wider range of information, and the frequency of their self-updating knowledge is also increasing. The teaching content of some courses, however, does not follow up the latest policies and environmental changes in a timely

manner, resulting in the contradiction between the teaching content and the latest knowledge acquired by the students from other channels, which gives students the impression that the courses are outdated, thus affecting their interest in learning and the effect of classroom teaching. Finally, society is saturated with the demand for graduates with a single obsolete knowledge structure. This further exacerbates the disconnection between the cultivation of digital media art students and the needs of society.

The breadth of school-enterprise cooperation is insufficient. At present, the school-enterprise cooperation of digital media art majors in our school is limited to some large-scale enterprises, ignoring the important role of small and medium-sized enterprises in talent training. There are few school-enterprise cooperation units and limited internship positions, which leads to the problem that students face the mismatch between the cooperative units and their own professional direction in the process of internship and employment. The depth of school-enterprise cooperation is insufficient. In the existing school-enterprise cooperation, part of the cooperation only stays at the surface level, and the enterprise teachers take one course each semester, but fail to go deep into the core level of curriculum and teaching reform. This makes it difficult for students to get substantial improvement in practical operation ability and skills. The long-term mechanism of school-enterprise cooperation is not sound. In the cooperation between our school and enterprises, have failed to establish a long-term and stable cooperative relationship with the cooperative units, which leads to the problems that students face in the process of internship and employment, such as the change of cooperative units and the failure to guarantee the quality of internship.

4.4 Faculty development issues

The construction of teachers is not perfect.

At the early stage of the establishment of the digital media art program, although some teachers of the professional direction counterparts were enrolled, the main teaching force is still the teachers of the animation production and advertising design majors. The number of teachers is small, and the task of class time is heavy, which makes it difficult for students to get adequate guidance and attention.

Now the quality of teachers in service varies, and among the existing teaching force in the school, some teachers have lower responsibility and teaching ability, which makes it difficult to meet the needs of teaching. This not only affects the learning effectiveness of students, but also hinders the development of the whole profession.

Lack of industry experience, most of the newly recruited teachers in the current school lack industry experience as well as teaching experience, which leads to a disconnect between teaching content and actual needs.

The proportion of teachers with high titles is low: The school pays too much attention to the teachers' academic qualifications and graduation institutions, and most of the newly recruited teachers are fresh graduate students from famous schools, which is lacking in the overall scientific research and teaching reform. The actual teaching ability and industry experience of teachers are neglected. This has led to some teachers

with high titles not being able to enter the teaching force, affecting the overall level of the teaching force.

4.5 Corporate Partnerships

The school lacks partnerships with other institutions and the digital media industry.

The breadth of school-enterprise cooperation is insufficient. At present, the school-enterprise cooperation of digital media art majors in our school is limited to some large enterprises, ignoring the important role of small and medium-sized enterprises in talent training. There are few school-enterprise cooperation units and limited internship positions, which leads to the problem that students face the mismatch between the cooperative units and their own professional direction in the process of internship and employment.

The depth of school-enterprise cooperation is insufficient. In the existing school-enterprise cooperation, part of the cooperation only stays at the surface level, and the enterprise teachers take one course each semester, but fail to go deep into the core level of curriculum and teaching reform. This makes it difficult for students to get substantial improvement in practical operation ability and skills.

The long-term mechanism of school-enterprise cooperation is not sound. In the cooperation between our school and enterprises, have failed to establish a long-term and stable cooperative relationship with the cooperative units, which leads to the problems that students face in the process of internship and employment, such as the change of cooperative units and the inability to guarantee the quality of internship.

Chapter5 Conclusion and Recommendation

5.1 Introduction

In this paper, based on the PDCA model, a detailed interview outline was formulated, and in-depth interviews were conducted by interviewing 40 students in the 2020 class of digital media art majoring in internship at Shandong Engineering Vocational and Technical University. In the process, systematically collected the necessary information and carefully organized the obtained data, followed by a comprehensive summary and in-depth analysis. Through an in-depth exploration of the current situation of the talent cultivation program for digital media art majors in Shandong Engineering Vocational and Technical University, found that it currently has a series of problems. Based on the PDCA model, put forward a set of targeted improvement measures and suggestions to promote the continuous optimization of the professional talent training program.

5.2 Current situation of the talent training program for digital media art majors in Shandong Engineering Vocational and Technical University.

Through in-depth exchanges with 40 interns from the digital media art program of the class of 2020 at Shandong Engineering Vocational and Technical University, conducted a detailed investigation into the talent cultivation situation of the program. After organizing and combing the information obtained, revealed that there are a series of problems in the talent cultivation of the digital media art major of Shandong Engineering Vocational and Technical University.

Firstly, the goal of talent cultivation is not clear enough, and there is a lack of clear guidelines for industry demand, which leads to the problem that the cultivated students may face insufficient ability in practical application. Secondly, there is a single way of talent cultivation, which lacks diversified teaching methods and practice opportunities, and fails to comprehensively train students' comprehensive quality. Thirdly, there is a shift in emphasis in the curriculum, which may be too theoretical or deviate from the actual needs of the digital media industry, making it difficult for students to connect the knowledge they have learned with the market demand. In addition, the construction of the faculty is not perfect, and there may be a lack of professionals with practical experience, which affects the quality of teaching. Finally, the school's partnership with other institutions and the digital media industry is not close enough, resulting in a lack of opportunities for students to interface with the industry and limiting their career development prospects.

Current situation (1) The objectives of talent training are not clear enough, and there is a lack of clear guidelines for industry needs, which leads to the problem that the

students trained may face insufficient ability in practical application; Current situation (2) Talent cultivation is single-minded, lacking diversified teaching methods and practice opportunities, and unable to comprehensively train students' comprehensive quality; Current situation (3) There is a shift in emphasis in the curriculum, which may be too theoretical or deviate from the actual needs of the digital media industry, making it difficult for students to connect the knowledge they have learned with the market demand. In addition, the construction of faculty is not perfect, and there may be a lack of professionals with practical experience, which affects the quality of teaching ; Current situation (4) The school's partnership with other institutions and the digital media industry is not close enough, resulting in a lack of opportunities for students to interface with the industry and limiting their career development prospects.

5.3 Improvement program and suggested programs based on the PDCA(Plan-Do-Check-Act)model

In this study, the main purpose is to put forward targeted improvement measures and suggestions based on the PDCA model for the current situation of digital media art professional training program of Shandong Engineering Vocational and Technical University. The PDCA (Plan-Do-Check-Act) model, which is a kind of cyclic process of continual improvement, is of high practical value for the optimization of the training of digital media art professionals in vocational undergraduate colleges and universities. practical value. This model emphasizes the continuous improvement and upgrading of the talent training program through the cycle of week after week, so as to better meet the social demand for high-quality digital media art professionals.

5.3.1 Plan session improvement measures

Conduct analytical research on market needs and trends to understand the latest trends and employment needs in the field of digital media , and establish a process for periodic review of course content to ensure that the content is aligned with the latest technologies and trends. This will help in planning the curriculum, based on, designing courses, both core and elective, to ensure that students acquire a wide range of skills and knowledge.

Clarify training goals. The Digital Media Arts program emphasizes technology and creativity as opposed to old media. Vocational undergraduate according to the regional industry, its own positioning and school characteristics for docking, the development of digital media arts professional training objectives, for the corresponding positions in society to train multi-level, cross-dimensional complementary digital media talent. The most important thing for professional construction is correct professional orientation. Professional training objectives should be based on the existence of social industries and supported by industrial development. In the digital media personnel training objectives do not have to seek for all but require precision, should be combined with the school characteristics and faculty to set targeted training objectives, to create their own

professional teaching platform, so that students immersed in learning and practicing the direction of a field of digital media to enhance the core skills and adapt to the requirements of the job.

Reasonable curriculum. In our school's digital media art professional curriculum, expand the curriculum field, from a single animation production to diversified development. Relevant courses such as digital games, virtual reality, interactive design and other related courses can be added to strengthen interdisciplinary integration and the integration between various disciplines.

The teaching mode of the curriculum is developing towards diversification. Vocational undergraduate digital media art majors should systematically apply the concept of interdisciplinarity to discipline teaching and practice, so that students can feel the charm of cross-disciplinarity and be able to take advantage of it to maximize their strengths. (Liu, 2020) In the education and training system, special attention should be paid to the combination of theory and practice, so that students can learn and improve more in expression, performance and creativity. It is necessary to think about the diversification of the teaching mode, and adopt more enterprise classroom, flipped classroom, enterprise project practical exercises, and students' personal media platform building competitions, so that students can practically feel the application and characteristics of digital media. Based on the joint application of a variety of have teaching methods, so that students are able to actively and effectively participate in classroom learning, and effectively guarantee the realization and enhancement of teaching effectiveness (Li, 2021).

5.3.2. Do link improvement measures

Implement a planned curriculum that ensures course content and hands-on projects are aligned with industry standards and best practices. And provide more hands-on projects and internships to allow students to apply their skills in real-world projects and gain valuable work experience. Provide students with the technical support they need to ensure that they can use digital media tools and software.

First, schools should reform the practical teaching system, set up courses and practical activities that are closely related to actual operation according to industry trends and job requirements, and ensure that the school's digital media labs and equipment are kept up-to-date to support teaching and practical projects.

Secondly, schools should strengthen the management of practical teaching to ensure the quality and effectiveness of practical teaching sessions.

Finally, implement inter-school collaboration with other institutions and the digital media industry to share resources and best practices in order to improve the quality of training. Through the cooperation with different institutions, can learn from each other, complement each other's strengths and improve the quality of education together. For example, joint training programs can be conducted with other universities to give students the opportunity to be exposed to the teaching methods and curriculum of different schools, thus enriching their learning experience. At the same time, it is also

possible to share teachers and invite excellent teachers from other schools to teach in our school, so as to improve our teaching level.

5.3.3 Check link improvement measures

Enterprises should become the base of the school, and the skills of students must be close to the social demand, with such a sense, the talent gap in the demand of enterprises can be filled. Vocational colleges and universities should pay more attention to the power of enterprises in the cultivation of digital media talents, find and develop school-enterprise cooperation modes, and build school-enterprise cooperation systems. School-enterprise cooperation needs to be carried out in accordance with the principle of "equality and voluntariness, mutual benefit and win-win". China's school-enterprise cooperation model should be shifted from institution-led to enterprise-led (Tian, 2021). In this way, enterprises can take the initiative and the talent cultivation of vocational colleges and universities can be closer to the market demand. Schools set up specialties and curricula according to the needs of enterprises to improve the targeting of vocational education talent cultivation.

Supplementing and upgrading the teaching staff and level, and continuous teacher training. Schools should increase the investment in the construction of teaching staff, improve the level of teachers' qualifications and titles through recruitment and training, and optimize the structure of the teaching staff. Schools should pay attention to teachers' industrial background and practical experience, strengthen cooperation with enterprises, hire enterprise experts as part-time teachers, and improve teachers' practical teaching ability. Schools should encourage teachers to participate in research projects and academic exchanges to improve their academic level and teaching ability to ensure that they keep up with the latest trends and technologies in the industry.

5.3.4 Plan session improvement measures

In the treatment (Act) session, Problems will be identified, experience will be summarized, objectives will be revised, and the planning stage will be returned to continue to adjust the personnel training programme until the desired results are achieved. This may include adjusting the curriculum, teaching methods and evaluation standards, etc. to better meet the needs of students and society. Through continuous optimization and improvement, the school's talent cultivation program will become more and more perfect, cultivating more excellent professionals for the development of our school.

5.4 Recommendations

Performance assessments of student academic achievement and program performance are conducted to determine the effectiveness of the program. After the implementation of optimization, the Check (check) stage is entered to evaluate the effectiveness of the adjusted talent training program. The actual effectiveness of the

program can be assessed through student satisfaction surveys, analysis of internships and graduate employment. Through these data, a more comprehensive understanding of the actual effects of the talent cultivation program can be obtained, which in turn can determine whether the program has effectively helped students to improve their skills, expand their knowledge, as well as cultivate their innovation ability and teamwork spirit.

In addition, education experts, enterprise representatives and current students can be invited to participate in the assessment process to ensure the objectivity and fairness of the assessment results. Through feedback from various aspects, the strengths and weaknesses of the talent training program can be more accurately grasped, providing strong support for subsequent optimization and adjustment.

Improvement Measures at the Act Stage In the Act stage, problems will be identified, experience summarized, objectives revised, and the program returned to the planning stage to continue to adjust the talent cultivation program until the desired effect is achieved. This may include adjusting the curriculum, teaching methods and assessment criteria, etc. to better meet the needs of students and the community. believe that through continuous optimization and improvement, the school's talent cultivation program will become more and more perfect, and cultivate more excellent professionals for the development of our school.

Digital media art major is committed to cultivating high-quality composite digital media art design and creative talents who can adapt to the needs of the whole media industry and participate in international cooperation and competition in the era of globalization and face the future. (Zhang, 2012) At present, the digital media industry shows a rapid development trend, and the huge consumer group makes the demand for talents in this field particularly urgent. However, the applicable talent training mode has not kept pace with the development of the industry. As an information technology industry, the technology of digital media is updated quickly, and the requirements for talents are relatively high.

The traditional teaching of digital media majors has insufficient awareness of industry, occupation and skill operation, and the curriculum system and technical environment often lag behind the actual development level of the industry. In order to cope with this status quo, vocational undergraduate education, as a new type of component in China's modern higher education system, should focus on breaking through the challenge of enhancing the vocational ability of human resources. Cultivating skilled human resources adapted to the production line has become an important issue for vocational undergraduate education.

In order to achieve this goal, vocational undergraduate education needs to continuously optimize the curriculum and teaching methods, strengthen the awareness of industry, occupation and skill operation, and make the curriculum system and technical environment closer to the actual development level of the industry. In addition, it needs to strengthen school-enterprise cooperation, introduce actual cases and needs of enterprises, and cultivate students' ability to apply their professional knowledge in actual work, so as to improve the quality of talent cultivation and better meet the social demand for digital media talents.

5.5 Research limitations

Influenced by my knowledge and experience, there are some limitations in the study on the improvement of talent cultivation program for digital media art majors in vocational undergraduate colleges and universities based on PDCA model-taking digital media art majors of Shandong Engineering Vocational and Technical University as an example, and these limitations may affect the comprehensiveness and universality of the study.

5.5.1 Sample limitations

This study mainly used qualitative research and interview method, and the samples of student interviews only covered students in specific colleges or specific grades, rather than being broadly representative: the interviews were only conducted with students in the internship period of the digital media major of the class of 2020 in the College of Arts of Shandong Engineering Vocational and Technical University, so the conclusions and recommendations of the study may not be applicable to other schools or different grades of the student population.

5.5.2 Subjectivity and bias of respondents

The results of student interviews may be influenced by their own subjective views and attitudes. Students may have particular views on issues due to personal experience or bias, which may affect the objectivity of the research findings.

5.5.3 Time constraints

The study is based on data and context only for a specific period of time. This study addresses the class of 2020 digital media arts students during their internship in 2023. The field of digital media arts is rapidly evolving and technology and industry trends can change in a short period of time, thus limiting the temporal sustainability of the findings.

5.5.4 Applicability of the PDCA model

The PDCA model (Plan-Do-Check-Act) is a cyclical process of quality management, but it may not be the best applicable model for all issues and situations. Other more appropriate models or frameworks may exist for talent development in digital media arts programs, and the study may not necessarily consider these potential options.

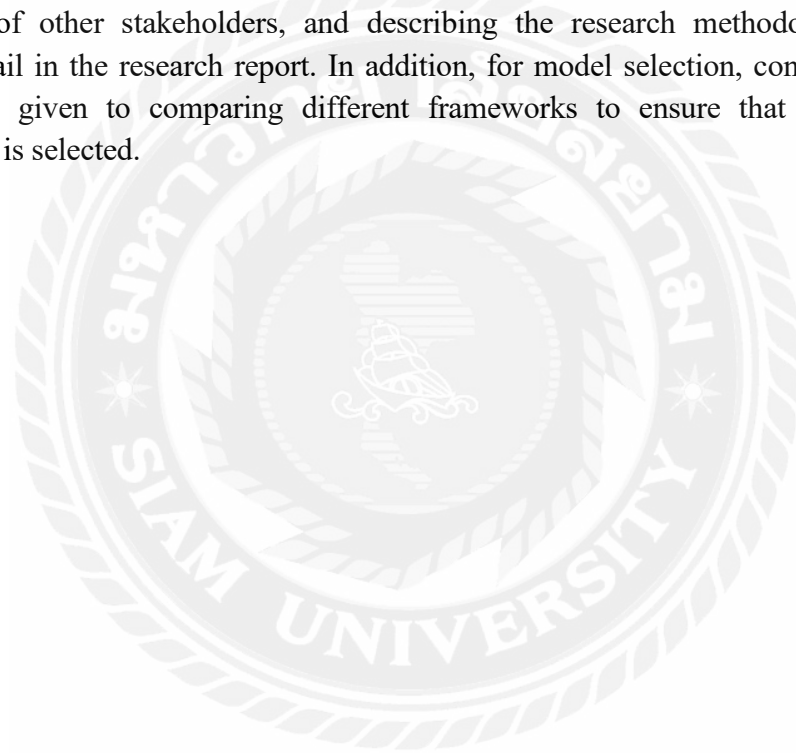
5.5.5 Limited access to information

The study in this paper relies heavily on student interviews and literature references, while ignoring other sources of information acquisition, such as teacher feedback, business feedback and experiences. This may lead to one-sided results of the study as a comprehensive stakeholder perspective is not covered.

5.5.6 Consistency and reproducibility

This study may not provide enough information to ensure that other researchers or institutions can replicate the study. The lack of sufficiently detailed descriptions and clear methods may reduce the consistency and reproducibility of the study.

To minimize these limitations, in subsequent studies, other researchers may consider using a wider sample, multiple data collection methods, digging deeper into the opinions of other stakeholders, and describing the research methodology and process in detail in the research report. In addition, for model selection, consideration could also be given to comparing different frameworks to ensure that the most applicable one is selected.



References

- Cai, L.P., & Jing, P. (2023). Process management of university teaching reform program based on "Deming ring". *Journal of Wuyi College*, (05), 100-104. doi:10.14155/j.cnki.35-1293/g4.2023.05.015.
- Dong, C.L., An, T.P., Bai, J.C., & An, H.G. (2022). Construction of "PDCA cycle" education model for jewelry e-commerce talents training under the concept of new liberal arts. *Journal of Handan College*, (04), 62-67.
- Fu, B.X., Ni, M.H., W., X.B., & Yang, L. (2013). *Innovation and practice of talent cultivation mode in digital media arts*. (eds.) Proceedings of 2013 International Conference on Education and Educational
- Ge, J. (2006). *Feasibility study of total quality management of teaching in China's colleges and universities* (Master's thesis). Soochow University. <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD0506&filename=2006157354.nh>
- Hou, Z. (2022). Research on interdisciplinary talent cultivation of digital media arts majors in the context of New Liberal Arts. *China Journal of Multimedia and Network Teaching*, (10), 61-64.
- Jia, R. (2020). Exploring the current situation and problems of digital media professional training in higher vocational colleges and universities. *Journalist's Cradle*, (10), 51-52.
- Liu, B.H., Cao, X.T., & Zhou, W. (2020). Exploration of interdisciplinary talent cultivation in digital media arts. *China Higher Education*, (22), 51-53.
- Li, Q. (2021). Exploration on the reform of "online + offline" hybrid teaching mode of digital media art and design majors. *Art Literature*, (09), 110-112. doi:10.16585/j.cnki.mswx.2021.09.047.
- Liu, X. K. Chen, S. (2023). The relevance, challenges and optimization strategies of cultivating high-quality technical skill talents in vocational undergraduate programs. *Shanghai Education Evaluation Research*, (04), 14-19. doi:10.13794/j.cnki.shjee.2023.0055.
- LiuZ. J. (2021). Policy evolution, development logic and path direction of vocational undergraduate education in China. *Vocational and Technical Education*, (26), 6-10.
- Liao, C.K. (2017). Educationality and vocationality as contingent perspectives for locating the nature of vocational education. *Education and Career*, (03), 100-104
- Li, J.H., Yang, H.J., & Ji, H. (2014). The construction of integrated quality management system for university-enterprise joint undergraduate programs. *Laboratory Research and Exploration*, (09), 259-264.
- Luo, X.Q. (2023). The current situation, core value and path design of vocational undergraduate programs to promote the integration of science and education. *Vocational and Technical Education*, (13), 19-24.

- Wang, H.L. (2023). Internal logic, deductive progression and practical exploration of the reform of teaching mode of higher vocational economics and management courses under the perspective of PDCA cycle. *Modern Vocational Education*, (34), 69-72.
- Wang, L. J., Yang, A. V. (2023). Analysis of blended teaching mode and quality control of "quality management system" course based on PDCA cycle. *Science and Technology Innovation and Productivity*, (03), 119-123.
- Wang, L.Y. (2022). Research and application of PDCA cycle in integrated teaching of science and practice. *Science and Education Literature*, (10), 88-92. doi:10.16871/j.cnki.kjwh.2022.10.024.
- Wang, W. (2022). Research on the balanced development of talent cultivation mode of digital media art majors in higher vocational colleges and universities. *Popular Literature and Art*, (22), 196-198.
- Wang, Z. H. (2020). Discussion on the cultivation mode of innovative digital media art professionals in higher vocational colleges and universities. *Journal of Beijing Institute of Printing*, (S1), 162-165. doi:10.19461/j.cnki.1004-8626.2020.s1.051.
- Wu, F., Liu, R., & Ma, H.F. (2023). Exploring the cultivation methods of digital media art majors in applied universities under the perspective of "New Liberal Arts"--Taking Beijing Union University as an Example. *Journal of Beijing Union University*, (01), 33-38. doi:10.16255/j.cnki.ltxbz.2023.01.006.
- Wu, Y. Y. (2019). Analysis of talent cultivation mode of digital media art majors in internet environment. *Media Forum*, (12), 34-35.
- Xiong, W.L., Wang, Y.H. (2023). Vocational undergraduate education: Historical evolution, realistic dilemma and development path. *Journal of Higher and Continuing Education*, (04), 42-47.
- Xu, G.K., & Liu, Y.S. (2023). Development logic and strategy construction of vocational undergraduate education in China. *Journal of Huanggang Institute of Vocational Technology*, (04), 40-43.
- Xu, P.W. (2021). The practice of integrated teaching reform of digital media art and technology courses--A review of introduction to digital media art and design. *Chinese Journal of Education*, (11), 149.
- Yang, J., Xiong, J., & Xiong, Q.W. (2022). Research on innovation and entrepreneurship talent cultivation mode of digital media art major in the context of first-class specialty construction. *China Packaging*, (11), 90-92.
- Yu, S. S. (2012). *Deming's quality management thought and its implications for school management* (Master's thesis). Qufu Normal University. <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD2012&filename=1012383836.nh>
- Zhao, Z.J. (1998). Deming's quality management idea and its application in education. *Foreign Education Materials*, (01), 33-39.

- Zhang, B.K. (2021). Discussion on the teaching reform strategy of higher vocational project-based curriculum under the background of industry-teaching integration--Taking digital media art design major as an example. *Shanxi Youth*, (24),159-160.
- Zhang, C.Y. (2022). Research on reflection and innovation of teaching digital media art and design. *Guangdong Vocational and Technical Education and Research*, (05), 137-140. doi:10.19494/j.cnki.issn1674-859x.2022.05.036.
- Zhang, G. (2023). Exploration of collaborative education strategies between schools and enterprises in vocational undergraduate education. *New Curriculum Research*, (24), 81-83.
- Zhang, P. (2004). Deming cycle and teaching quality management. *Tianjin Education*, (11), 21-22.
- Zhang, Y., & Cao, Y. (2022). Research on the strategy of organizing vocational undergraduate education in schools under the "Double-High Program". *Vocational and Technical Education*, (12), 14-18.
- Zhou, J., D, P., Li, C. & Yang, Y. (2004). (2023). Exploring and thinking about the development of manufacturing vocational undergraduate education in the context of industry-teaching integration. *Mold Manufacturing*, (09), 76-79.
- Zhou, S., & Wang, M. H. (2022). Reform and practice strategy of digital media art professional curriculum under the background of new liberal arts. *Journal of Hubei Open Vocational College*, (22), 145-147.
- Zhou, X.J. (2018). Exploring the operational path of diagnosis and improvement of teaching work in vocational schools based on PDCA cycle. *China Vocational and Technical Education*, (05), 37-40.
- Zhou, Y. (2018). Analyzing the sound method of talent cultivation mode for digital media art design majors in our school. *Popular Literature and Art*, (21), 214-215.

Appendix

Digital Media Arts Internship Talent Development Program Interviews

Hello classmates!

Welcome to today's interview on the Digital Media Arts program. Digital Media Arts is a booming field that involves graphic design, animation production, virtual reality, game development and many other aspects. We are very pleased to be able to talk with you to learn more about this fascinating field and to provide you with strong support for your future career planning.

In today's interview, we will delve into the core curriculum, practice opportunities, and future career trends in the Digital Media Arts program. Our goal is to provide each student with a well-rounded learning experience that will enable you to be competitive in this rapidly changing digital age. In addition, we will also introduce some successful alumni cases and share their achievements in the field of digital media arts to inspire you to pursue excellence in your academic and career endeavors.

During the interview, please share your interests and expectations of the Digital Media Arts program by actively answering the following questions. Our instructors and the head of the professional training program will answer your questions and help you better understand the major and plan your future academic and career paths.

Thank you for your participation, and let's start this interview on the professional talent cultivation program of Digital Media Arts and explore the future creative path together!

(Plan) :

1. Goal Setting:

(1) For the digital media arts major, what do you think should be the core objectives of an ideal training program?

(2) What do you think are the most important skills or competencies in a training program for this major?

2. Curriculum design:

(3) Do you think the curriculum offered by the school meets the actual needs of the digital media arts industry?

(4) Are there specific courses or skills that should be emphasized more or added to the curriculum?

3. Practical opportunities:

(5) What do you think is the importance of students' access to practical experiences and project opportunities in the talent development program?

(6) Does the school provide enough practical opportunities to support students' learning in the field of digital media?

4. Resource support:

(7) Does the school provide adequate resources and facilities to support student learning in digital media arts?

(8) Are students satisfied or is there room for improvement with regard to software, tools and equipment in the field of digital media?

(Do) :

5. Curriculum implementation:

(9) What is your opinion of the way the current curriculum is being implemented? Are these approaches considered effective in supporting student learning and development?

(10) Are students involved in real-world projects or opportunities to work with industry professionals?

6. Facility utilization:

(11) Are the digital media arts facilities provided by the school adequate? Is there room for further enhancement?

(12) Does the school provide an excellent learning environment to support the academic and creative development of students?

7. Internships and cooperation:

(13) Does the school offer opportunities for internships or partnerships with industry? What is the impact of these opportunities on students' career development?

(14) Do students have opportunities to interact or practice with industry professionals?

(Check) :

8. Curriculum assessment:

(15) What is your assessment of the quality and relevance of the current Digital Media Arts program?

(16) Is there a need to restructure or update certain courses to keep up with industry developments?

9. Learning experience:

(17) Are students satisfied with the digital media arts learning experience provided by the school?

(18) Are there any improvements that could be made to enhance the student learning experience?

10. School support:

(19) Does the school provide enough counseling and support to help students cope with the challenges of learning digital media arts?

(20) Is the school perceived to be providing enough support to the students?

(Act) :

11. Improvement plans:

(21) Has the school considered improvements to the Digital Media Arts program?

(22) Are there improvement plans underway or to be implemented based on student feedback?

12. Change implementation:

(23) Has the school taken specific actions to improve the digital media arts program?

(24) Are there plans or measures in place to improve the quality of existing programs or provide additional support?